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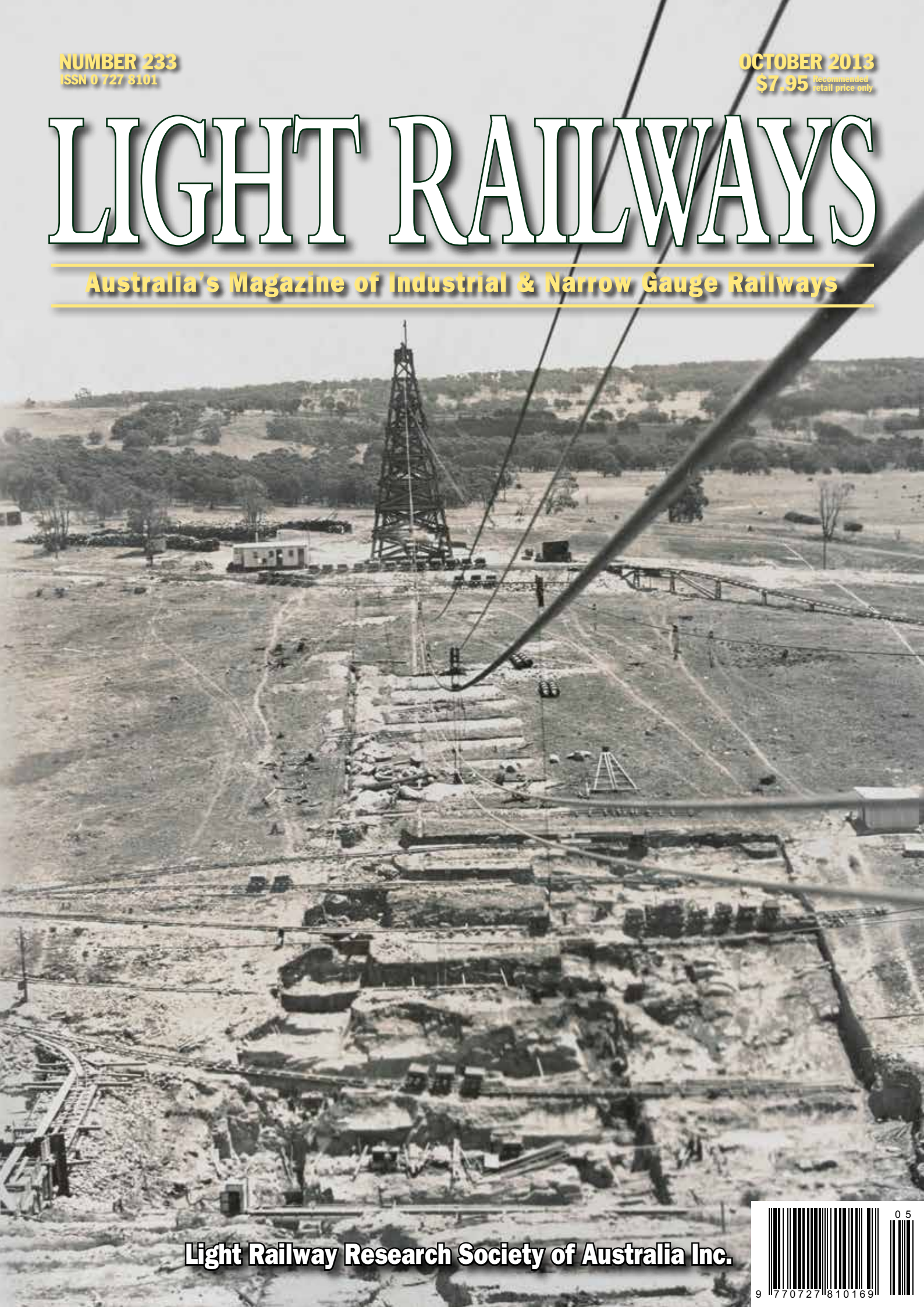
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.

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Australia's Magazine of Industrial and Narrow Gauge Railways

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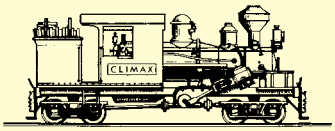

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Imperial to metric conversions:

1 inch (in)	25.4 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.61 kilometres
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1 gallon	4.546 litres
1 cubic yard	0.765 cubic metres
1 super foot (sawn timber)	0.00236 cubic metre

Contents

Comment

I would like to start this issue off with a big thank you to Bruce Belbin, Bob McKillop and John Browning for their dedication to creating the outstanding publication that *Light Railways* magazine has become.

While Bruce and Bob have retired, their ongoing support is greatly appreciated, as is the hard work from the revamped team as we strive to maintain the high standard that our readership has come to expect from *Light Railways*.

It is now our responsibility to build on this legacy, which I see as crucial to the sustainability of the society. The role of editor is one I take very seriously, which is why I decided to step down from council to take on the role. As the official publication of the LRRSA, a key role of the editors is to support existing researchers, and also to encourage and involve the next generation.

In line with encouraging new researchers to make a start, Stuart presents an outstanding opportunity on page 33 of this issue; the State Rivers & Water Supply Commission of Victoria's construction of Lauriston dam on the Coliban river. If this project sounds interesting, or you have another project in mind, send us an email to see if we can assist. *Scott Gould*

Front Cover: *Less than ten years after the Hoover dam revolutionised concrete dam construction, the technology was being used by the State Rivers and Water Supply commission in constructing Lauriston reservoir in Victoria. Taken from one of the towers, a Malcolm Moore locomotive can be seen moving skips along temporary track as the dam foundations are being excavated. For more information on this project, refer to page 33 in this issue. Photo: State Library of Victoria, Accession Number: nvp/a48.554*

Little Yarra *(Baldwin B/No.37718 of 1912) on a Powelltown bound train with the first (temporary) passenger car, crosses Saxton Creek bridge Gilderoy, in 1913.* *Photo: Forests Commission Victoria, hand-tinting: Frank Stamford*

One hundred years ago…

… there was a hive of activity in the Little Yarra River valley, 80 kilometres east of Melbourne, as the Victorian Powell Wood Process Ltd built its large timber mill, with attached township, at Powelltown, and a 3ft gauge steel-railed tramway to link it with the Victorian Railways broad-gauge line at Yarra Junction, 17 kilometres away.

For the settlers in the valley, the tramway was a mixed blessing, as they had wanted the Victorian Railways to build a broad-gauge branch line, and that project had got to the survey stage. The tramway put paid to that idea, but the Shire Council insisted the company provide a passenger and goods service. It was the only timber tramway in Victoria – and possibly in the eastern states – to do so.

There was no grand opening, but trains were operating by May 1913. Passengers were not being carried until August, and initially only in a converted goods truck. The first of two passenger cars did not come until the following year.

For the settlers in the townships of Gladysdale, Black Sands, Three Bridges, and Gilderoy the tramway brought reliable transport for the first time. It also brought post offices, telephone communication, and a daily mail service.

The tramway remained a life line for the Little Yarra valley until the construction of an all-weather gravel road in the late 1920s took away most of its goods and much of its passenger traffic. It remained in use for timber traffic until finally closing in July 1944.

To the east of Powelltown the tramway continued for the carriage of logs and sawn timber, and in this area the country was mountainous and rough, necessitating many bridges, steep grades, a tunnel, and cable-worked inclines. The bush line also closed in 1944.

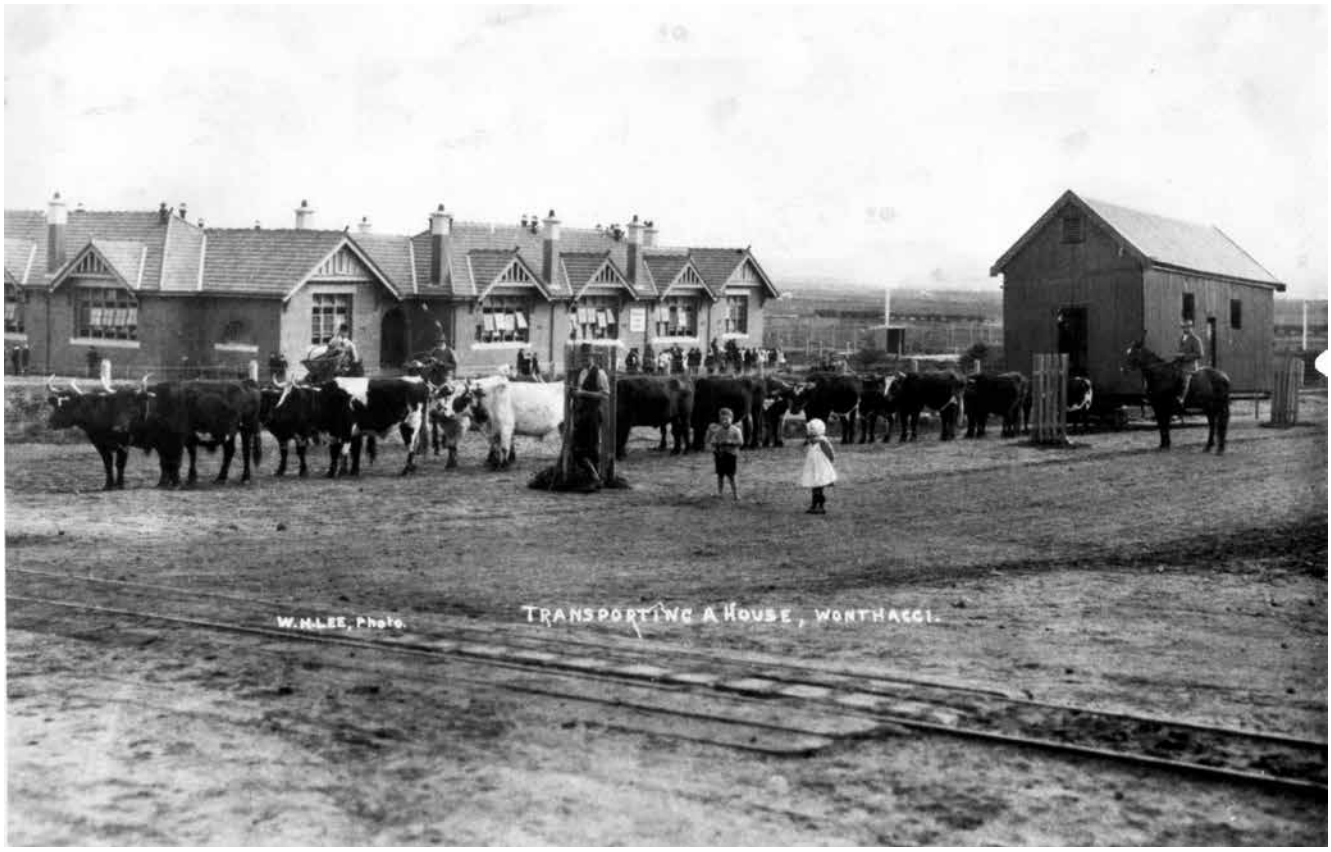
To mark the centenary, the Upper Yarra Valley Historical Society (UYVHS) is organising a programme of events on Sunday 17 November 2013, commencing at their Yarra Junction museum – the former Yarra Junction railway station – at 9.00am. The celebrations will centre around a self-drive tour along the valley. Significant sites will be signposted, and access will be allowed to a number of locations on private property.

The LRRSA is supporting this event by the production of a special 32 page booklet – *Powelltown Tramway Centenary 1913-2013*, which will be available (from 17 November) for purchase at $10.00 ($12.00 including postage). However, each LRRSA member will be receiving a free copy.

The new booklet includes the most detailed maps of the Powelltown tramway ever published. These show the location, length and height of bridges, curve radii, embankments, cuttings, and other features. For most of the first 19 km of the tramway this information has come from the original survey drawings of the tramway, which have only recently been discovered by the UYVHS. For the major part of the remainder of the tramway, on-site surveys have recently been completed using the most up-to-date technology to take the measurements.

The booklet also includes detailed gradient profiles, which have also come from the original survey plans, and recent on-site surveys.

Frank Stamford



The only known photograph of the Brickworks tramway within the township. It is seen here crossing Billson Street with the state school in the background. *Photo: Author's Collection*

The Wonthaggi State Brickworks and its tramway

by Mike McCarthy

The Wonthaggi State Brickworks and its tramway have always been something of an enigma to those who have an interest in Victoria's State Coal Mine. Most Wonthaggi residents know that the brickworks once existed and that they were short-lived. Many would also speak of a smell of political skulduggery that was said to have accompanied their closure. The vast majority would be unsure of exactly where the brickworks were located and few would know that a 2ft gauge tramway linked the brickworks to the town.

The creation of the brickworks, and its demise for that matter, were inextricably linked to the circumstances surrounding the Victorian brick manufacturing industry in 1910 and to the opening of the Powlett coal field at Wonthaggi. For this reason we need to understand a potted history of these matters.

The economic depression of the early 1890s saw the closure of many brick manufacturers around Melbourne as competition for a collapsed demand led to prices below cost. Those that survived did so by eating into their rapidly dwindling cash reserves. To forestall total failure the remaining major businesses formed a cartel to control the supply of bricks to the market and therefore the prices charged. Prices were underpinned in a way that guaranteed the survival of the cartel members. A monopoly was effectively formed.[1]

The cartel operated in this fashion virtually unimpeded throughout the 1890s and into the 20th century. However, it came to the notice of then Liberal State Treasurer and soon to be Premier, Thomas "Tommy" Bent in 1904, when the tenders were to be called for the construction of what later became known as Flinders Street Station. This massive structure was to be built in brick but Bent baulked at the asking rate of 40 shillings per 1000 bricks.[2] He had experience in the brick industry and was aware of what the brick manufacturers were doing.[3] He set himself the objectives of reducing the price of bricks and breaking the power of the cartel. In February 1904, with little discussion or consultation with either the brick manufacturers or his fellow government members, Bent purchased land on behalf of the Government at Thornbury. He followed this by acquiring brickmaking equipment, declaring he was going to establish a State Brickworks so as to supply the Flinders Street Station project and to then compete on the open market against the cartel.[4]

Interestingly, in addition to the predictable vocal opposition from the manufacturers and industry groups, the strongest resistance came from within his own party. The Labor Party offered no effective opposition because the proposal was quite socialist and in line with Labor's own ideals. Nevertheless, in 1905, Bent, by now Premier, was forced to step back from his attempt to establish the enterprise by his own party but in the process succeeded in achieving a substantial concession on the price for the bricks.[5] Four years later he was deposed as Premier and he subsequently died later the same year. He was not to know that his attack on the cartel would continue.

His successor as Premier, Jack Murray, and the Minister for Mines and Railways, Peter McBride, although opposed to Bent in several areas, were supporters of the initiative to bring competition and efficiency to the brick industry. They strongly believed that pricing, quality and availability of supply were governed by the cartel and that it was acting against the interests of the public and industry. Despite the concessions gained for the station project and some other government work, people generally and the Victorian Government in particular were of the view that too much was being paid

for what were considered to be poor quality bricks supplied sometimes on a selective basis. A Brick Royal Commission was created in 1913 to discover the facts in detail but, prior to this, a crisis in coal supply and the consequent emergence of the town of Wonthaggi provided the opportunity for the Government to address the matter.

The opening of the Powlett coal fields, centred on today's Wonthaggi, was in response to Victoria's near-total dependence on imported New South Wales coal for locomotive fuel. Industry was also similarly reliant on shipments from the north to keep its wheels turning. Successive governments had well understood the vulnerability of Victoria to the vagaries of coal supply from elsewhere and over many years had sought to encourage exploration for a local source. From as early as 1852 the discoverer of a workable seam could claim a reward of £1,000 (which Richard Davis ultimately did). In 1891, following the completion of the Great Southern Railway as far as Leongatha, a number of black coal mines opened around Korumburra, Jumbunna and Outtrim. Handicapped by their small scale and coal quality, the private mines struggled to compete with coal from the north.[6]

From 1901 state-sponsored boring in the area north of Cape Paterson intensified with a view to discovering the extent of the field thought to exist there. Early in 1908 Bore No. 11 struck a substantial seam of coal which led the State cabinet to reserve a large tract of country in the Parish of Wonthaggi for coal mining purposes. Further boring confirmed that it was indeed a large field and March 1909 saw the first shaft sunk to examine the seam in more detail.[7] The absence of a railway to carry away the coal meant that following the extraction of a sample from the shaft most work effectively ceased. This situation was to change dramatically in November of that year when the miners' strike in NSW, centred on Newcastle, placed the Victorian Railways and Victorian industry generally, in a dire situation.[8]

Seriously alarmed at the threat to transport, industry and jobs, the public was receptive to a decisive step by the Government to resolve the matter and accordingly the opportunity to take action was seized. Led by Minister for Mines and Railways, Peter McBride, the opening of the coalfield and the construction of a railway to serve it were quickly authorised with nothing spared with respect to resources needed to commence the despatch of coal to Melbourne in as short a time as possible. The achievements attached to this initiative are truly remarkable but in their detail, unfortunately, beyond the scope of this article. Suffice to say that just over three months after the Newcastle coal strike commenced the first load of coal was despatched by rail from Wonthaggi. This involved the engagement of over 900 miners, the provision of accommodation for them, the sinking of three more shafts, the construction of miles of underground drives radiating from the shafts and the building of nearly 30 miles of railway.[9] Around 10,000 tons of coal lay at grass by the time the first train arrived in late February 1910.

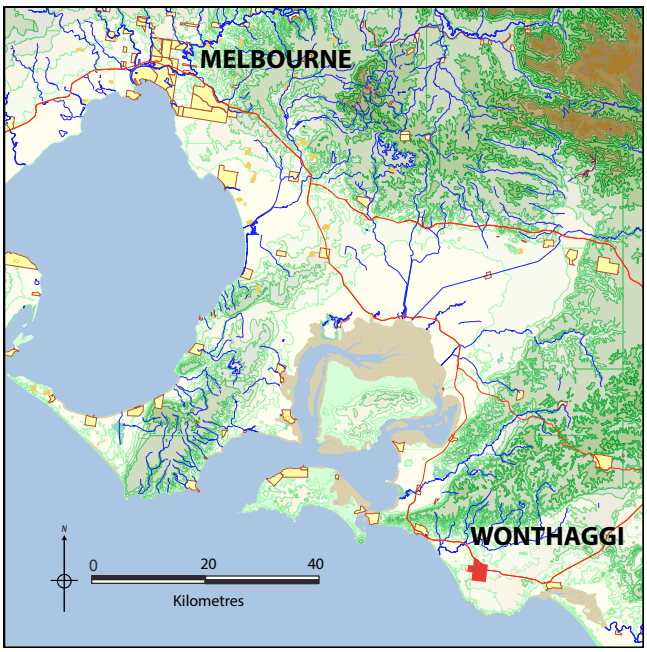
With coal traffic underway the tempo didn't decrease. In fact the opposite was true. Most of the early shafts were temporary in nature, some worked with converted drilling rigs. They satisfied the need to get easily won coal out fast and off to the metropolis. With this happening, attention turned to more fundamental activity; the development of the two main shafts into permanent operation with screens for loading railway trucks and the replacement of the tent city that lay adjacent to the mines with a permanent township.

The temporary tented accommodation kept separate from the site of the proposed township indicated good forward thinking. Eastwards of the mines was a stony rise beneath which no coal lay. It was here that surveyors planned a carefully laid out town starting from the railway station and extending to the south. As with the mines, Wonthaggi was to be a model of how things should be. Wide streets, rights-of-way, drainage, piped water from a dam to be built in the hills nearby and reticulated electricity generated from a coal-fired plant positioned near the No.3 shaft were key components of this model. It was planned to perfection and quite socialist in its ideals despite it being a Liberal government at the time. The State was to exert control even to the extent of selling leaseholds and not freehold property. By this means policing the use of land would be easy.[10]

Size was also part of the Government's vision. At this point McBride imagined Victoria would see another Ballarat or Bendigo rise in the south-east.[11] Where those two great cities enjoyed substantial buildings that demonstrated their prosperity built on the back of mining, Minister McBride expected the same of Wonthaggi.

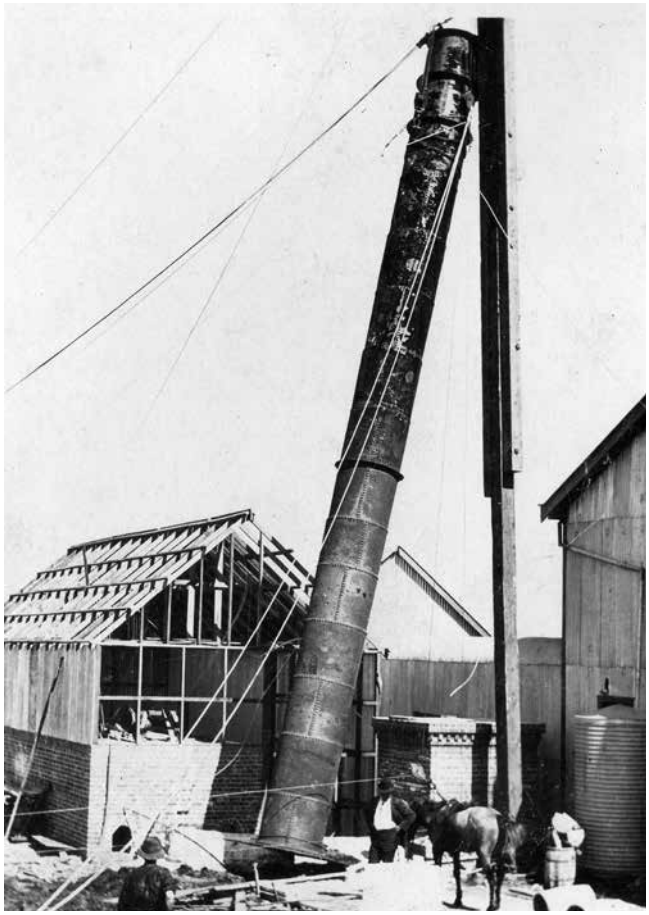
McBride wanted the businessmen in the town to build in brick. Brick suggested permanence and wealth, and it matched his view of a model town. Through George Broome, the General Manager of the mines, he sought to include in the town's commercial leases a requirement to use bricks, concrete or stone.[12]

On the ground in Wonthaggi matters had to happen fast. If McBride wanted the commercial part of Wonthaggi built in brick, work needed to start immediately. There was no point in requiring businesses to build in brick if the material was not available. A deposit of silurium schists, suitable for the manufacture of bricks using the dry-pressed process, existed to the east of town, at the end of Watt Street.[13] The Government, through McBride saw this as an opportunity to repeat the success of Bent's efforts with Flinders Street Station and to renew the assault on the brick cartel. Its estimate was that bricks could be produced locally at 28 shillings per 1000 bricks which was substantially less than the 60 shillings per 1000 it would cost to supply them from Melbourne. A big part of the saving was in the proposed use of cheap local coal for the firing process. Given the high cost of the investment in opening the Powlett coal fields no one could argue against the Government pushing on with the proposal even if it included selling Wonthaggi bricks into the Melbourne market in later years. The idea of a State Brickworks was reborn.



The Scotch kilns around August 1911 viewed from the west. The closest structure was a single kiln while the two further away comprised two kilns in each structure. The move from using the local coal to firewood has happened *Photo: Wonthaggi Historical Society*

In April 1910, with advice from prominent Melbourne brick maker Mr A Spear, of the City Brick Works Co Pty Ltd, Hawthorn, Broome ordered equipment suitable for turning the clay to the east of Wonthaggi into "green" bricks. A week or two later the plant was delivered to the site. But before anything could be erected it was found that beneath the clay lay a massive deposit of coal. A move further west onto another deposit of the same clay on the side of Reservoir Hill was necessary.[14] This was away from the coal deposits and work started immediately on assembling the equipment, erecting a shed and exposing the clay. With help from the Hon. Martin Hannah MLA (notably a prominent member of the Labor opposition and later chairman of the Brick Royal Commission), Broome had some bricks burnt from a sample taken out of the pit. They proved to be very good and work proceeded apace.[15]



Boiler shed under construction around January 1911.
Photo: Wonthaggi Historical Society

During May a face, 40 feet in depth, exposing the mudstone was dug and later that month the erection of most of the machinery had been completed.[16] But late in the month all work came to a stop.[17] Minister McBride, on a visit to Wonthaggi, declared that he did not want the brickworks located in the town.[18] No doubt influenced by the issues arising in Melbourne from having the brickmaking industry largely concentrated in the inner suburbs he declared that this was not going to happen in the model town of Wonthaggi. All work came to an immediate halt while, with great urgency, a more suitable site was sought.

Although one might well argue with hindsight that a major brickmaking industry at Wonthaggi was always doomed to fail, if there was a defining moment for the enterprise it was this. The original site had been thoroughly assessed and the brickmaking process chosen, (the dry-pressed method) matched the clay at that location. At the insistence of McBride, Broome, a mining engineer, was required to locate another site without delay and, according to McBride, within 24 hours![19] For very practical reasons, another four months was to pass before work could recommence. A program of boring was instigated which ultimately identified a large deposit of clay about 1½ miles west of Wonthaggi. A Mr Bailey of the Mines Department undertook laboratory tests that determined it suitable for brickmaking. A tile had been produced from the clay using a furnace at the laboratory.[20] In early September construction commenced at the new site.[21]

It was during this period that one Thomas Blower, an experienced brick maker, sought a meeting with Broome to offer advice about the operation.[22] He must have impressed

Broome for in early October he was appointed manager of the works.[23] His employment was part of efforts to speed up construction which was to include a tramway to connect the works to town and a railway siding to facilitate the despatch of bricks to Melbourne and elsewhere.

The ultimate objective was to construct a Hoffman kiln but bricks were needed for its construction and there were the immediate needs of the township to be met as well. For these reasons, because of their simplicity of construction, two Scotch kilns were to be built immediately. These were essentially four-walled structures with a series of tunnels running through for the setting of the kiln fires. The green bricks were stacked in a lattice fashion leaving space to allow the firing tunnels to pass from one side of the structure to the other.

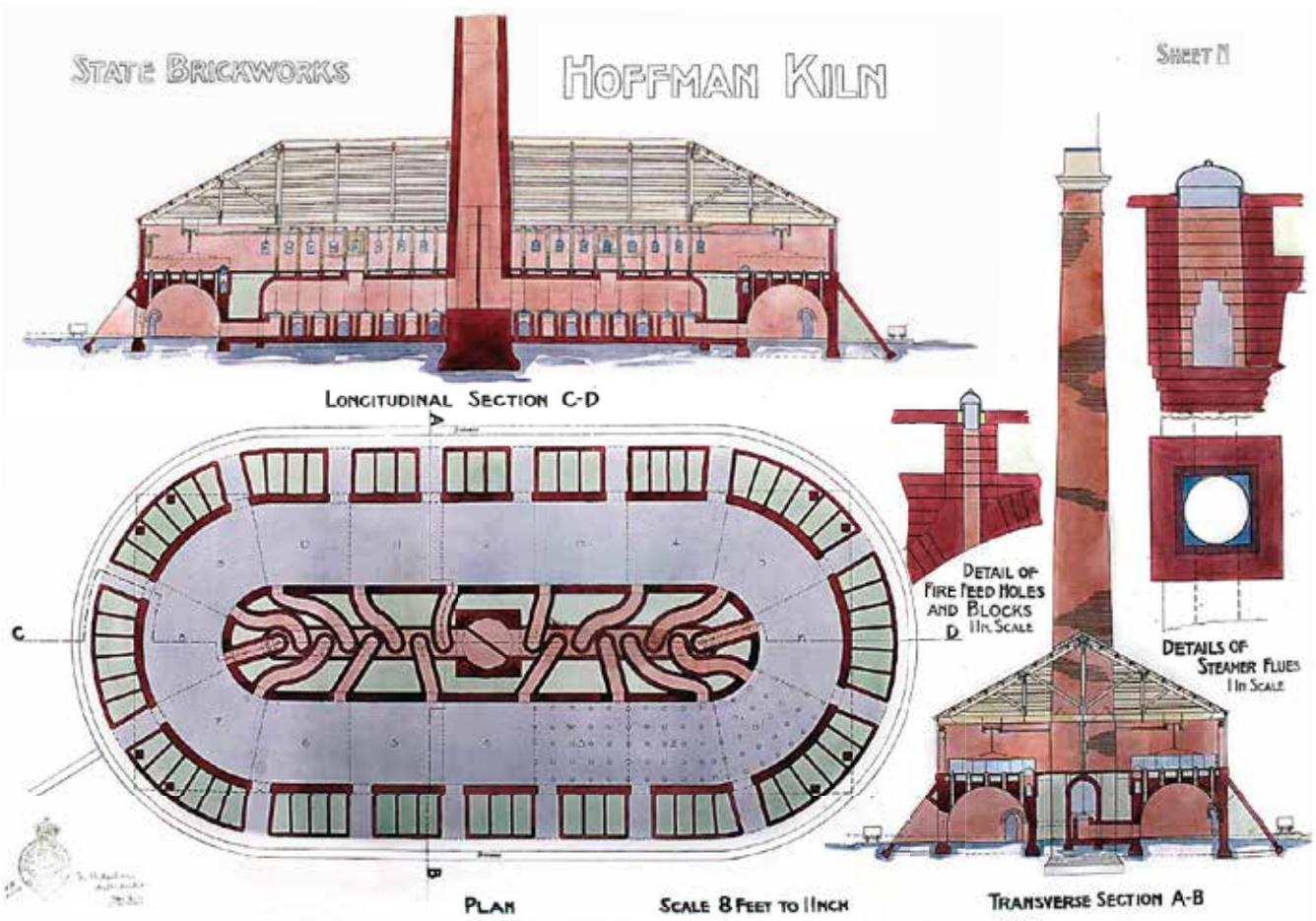
Within a month of Blower starting work the first kiln had been burnt. Unfortunately its casing opened during the process allowing the heat to escape, spoiling most of the bricks inside. However two weeks later the second kiln was fired, charged with 43,000 hand pressed bricks. It was better constructed than the first and the expectation was that a better result would be achieved.[24] Silence in the records suggests that perhaps the optimism wasn't matched by the result!

It would seem that, over the following months, efforts then turned towards the proper establishment of the plant. The erection of an engine house to enable machine pressing of bricks was central to this as was the construction of the Hoffman kiln. Completion of machinery installation was achieved in March 1911 within a week of closure of tenders for the construction of the Hoffman kiln.

The kiln was to be a very substantial affair, 140 feet by 58 feet, with 16 chambers for brick firing using the local coal. Towering above the structure was a brick chimney 110 feet in height.[25] With the steam-powered pressing works adjacent and a steam winch elevator to raise material from the clay hole the operation was to be impressively equipped as one would expect from a Government initiative aimed at regulating the state-wide brick industry. The actual design of the kiln dated back to Bent's 1904 attempt to construct the State Brickworks at Thornbury. The plans for the structure were completed in 1905 but were shelved when Bent was forced to abandon the project. They were dusted off when the project was resurrected at Wonthaggi.[26]

The Hoffman process

The Hoffman kiln was at the forefront of brickmaking at the time. In simple terms it involved the use of an oval tunnel inside the structure. The chambers along the tunnel were separated by removable steel shutters that allowed a chamber to be fired while those further along the tunnel were being set with bricks. Using the shutters and controllable flues the hot gases from a chamber being fired could preheat and dry green bricks in the adjoining compartment. When firing was complete in a chamber the fire would be allowed to pass to the next chamber while the original was sealed for cooling. By this method, over a period of around two weeks, the fire could make a complete circuit of the tunnel (ie. a "round") progressively firing chambers of bricks. In theory this could continue indefinitely. Above the firing tunnel, on the first floor of the structure, men worked feeding fine coal to the fire through sealable firing holes in the roof of the tunnel.



The State Brick Works Hoffman kiln, originally intended for a site at Thornbury, featured the "race track" core around which the kiln fire travelled, progressively firing bricks in successive chambers. The fire was fed fine coal through the fire holes on the first floor. Its vulnerability to the suitability of coal for firing can be well understood! *Image: VPRS 16791 P1 74*

The Tramway

The shift of the brickworks away from the town centre meant that a means of transporting bricks to town was needed. Around February 1911 work commenced on the construction of a 2ft gauge steel-railed tramway to meet this requirement. The tramway followed a route that skirted to the south of the current, and planned, areas of mining operations. It travelled a kilometre to the south and east of the plant, along a raised formation that was reasonably substantial in places, to meet the eastern end of Campbell Street, then a bush track. It more or less followed this easement for a further 1.3 kilometres deviating for a few metres here and there in search of a good grade. There was also a sandy rise a short distance along the road where the tramway veered northwards for a short distance to reduce the gradient.

At the rear of the Wonthaggi hospital the tramway left the road reservation and travelled diagonally across the heathland to meet Baillieu Street which it then followed on the north side until arriving at its destination at the Brick Depot a short distance past the Billson Street corner, 3.3 kilometres from journey's start.[27] It was a well laid line with sawn wooden sleepers and ballast being used in its construction.

With eleven men engaged on the task,[28] construction was swift with the formation complete and rails laid past the hospital by the end of April[29] after which completion was delayed pending the delivery of more rails. The tramway was finished through to the Depot early in June 1911.[30]

With the tramway providing a rail link from the centre of town, past the central mining area out to the west, the opportunity existed to move more than bricks. Two other major projects were also underway at this time and both lay along the route of the tramway. The first was the power house, situated 1.7 kilometres to the west of the centre of town, and the other was the opening of Shafts 9 and 10 which were located adjacent to the brickworks. The power house needed stone and bricks while the new shafts needed a means to move equipment and materials to the site.

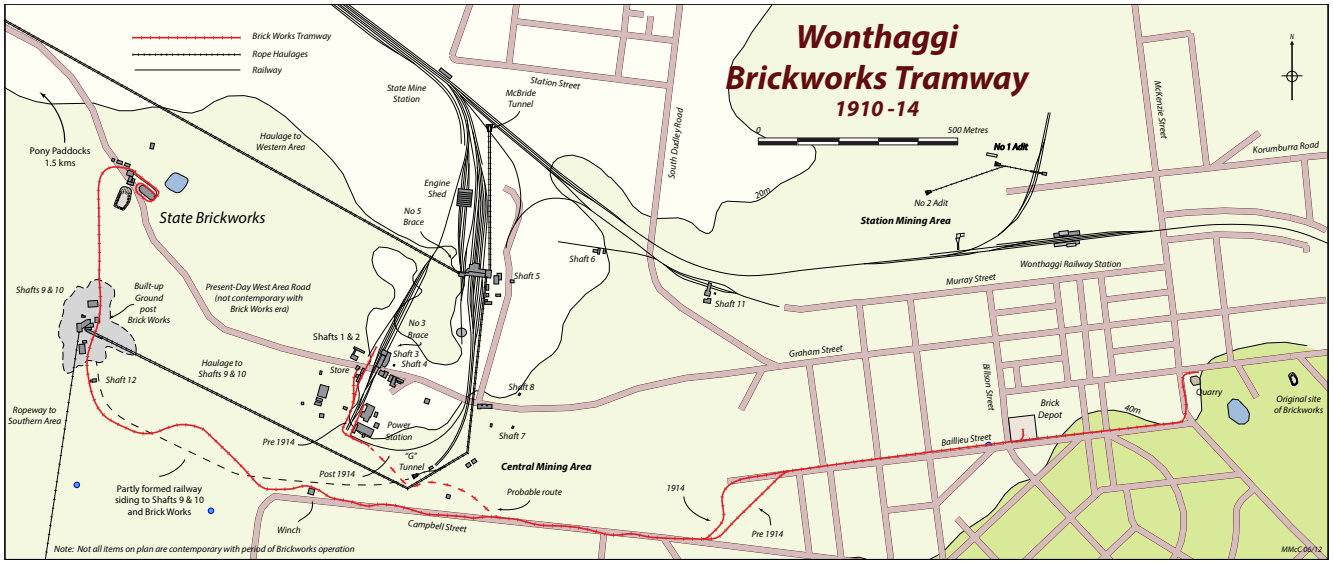
A quarry had been opened at the eastern end of town quite close to the original brickworks location. Stone was to be moved from the quarry to the power house, presumably for the boiler settings so, in May 1911, the tramway was extended 550 metres eastwards to the quarry and a branch was laid down to the power house site. The work proved to be largely a waste however when a decision was made not to remove stone from the quarry, probably for the same reason that the brickworks were shifted. McBride didn't want industrial activity happening close to his model residential town. Despite tenders having been called to operate the tramway through to the power house, the rails between the quarry and the brick depot lay abandoned until they were removed before May 1912.[31]

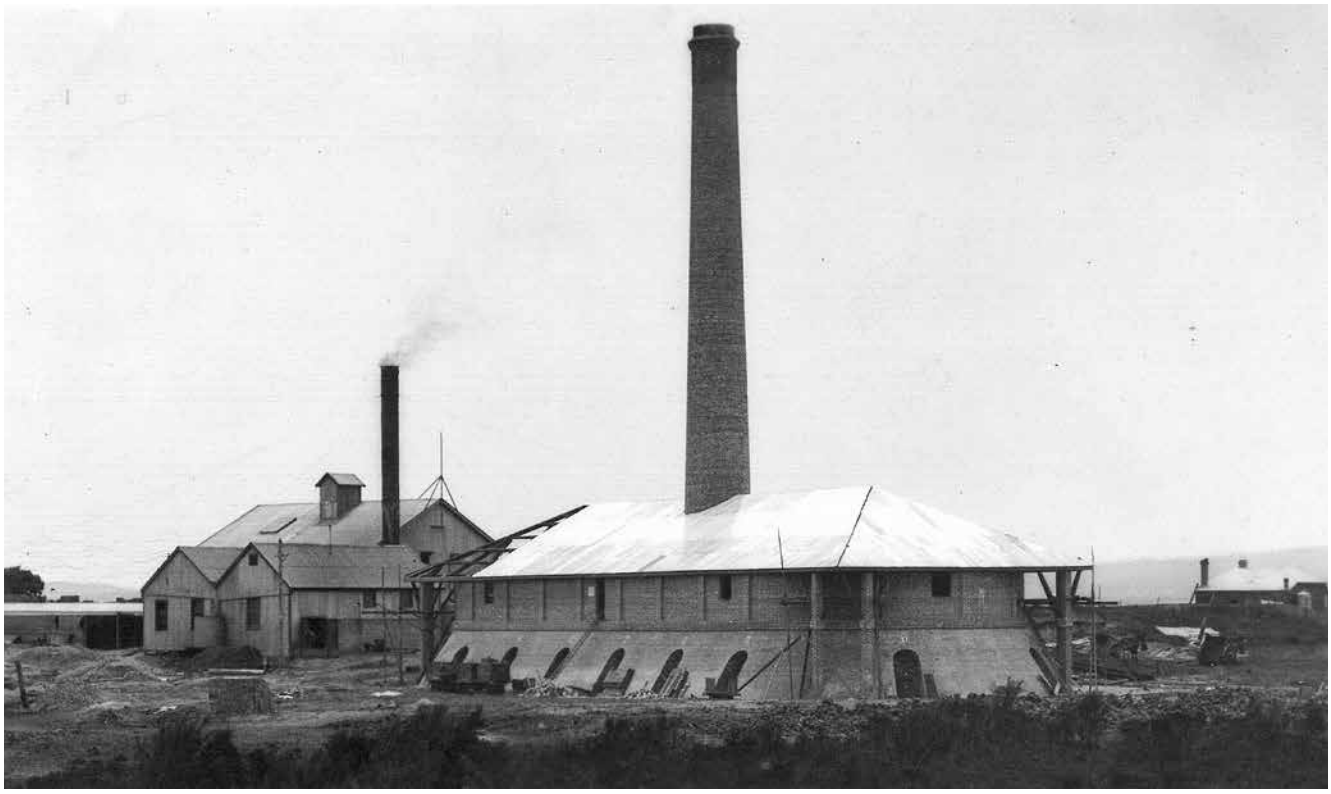
It was a different story with respect to the branch to the powerhouse. It was also to be used to carry bricks for the construction of the boiler foundations, the main structure and the chimneys. A fork from this branch also served another purpose. The development of Shafts 9 and 10, close by the brickworks, required the movement of plant and machinery from the State Coal Mine store and adjacent railway siding.[32] In June 1911 the tramway was extended northwards past the store to the pit props yard. A winch was placed alongside the tramway at about the half-way point on the journey back to the brickworks to haul heavy loads destined for Shafts 9 and 10 over the high point of the line at that location.

In May 1911 work was also underway in the State Mine workshops to construct the rolling stock to be used on the line. In all, 14 trucks were built by mine staff for use on the tramway. Three classes of truck were provided. The largest were the two bogie trucks capable of carrying 1000 bricks each[33] (later reduced to 500 bricks). They were supported by the mainstay of the fleet being the nine hopper trucks capable of carrying 320 bricks each whilst three smaller hopper trucks each had a capacity of 200 bricks.[34]

Operations on the tramway commenced on 29 June 1911 when a bogie truck, hauled by a single horse, delivered the first load of second-grade bricks to the depot. One of the works crew from the brickworks would have been the driver as the contract for haulage on the line wasn't let until early August, when McRae Bros were successful, with a price of 2s 5d per 1000 bricks.[35] They commenced regular haulage on the tramway on 18 August 1911 but were to remain at work for less than a month. Delays in loading at the works, a shortage of bricks available for haulage and the unavailability of trucks meant that they were losing money. Their plea for an increase in price fell on deaf ears and the contract was duly passed to JE Keighley who had tendered 2s 10d per 1000 bricks carted.[36]

Construction of the railway siding that was to serve the brickworks commenced around the same time work started on the tramway. It was to follow a route that extended beyond the sidings serving Shaft No.5 and curve to the west to swing past Shafts 9 and 10 which were also to be served by the siding and then on to the brickworks. Much of the formation as far





The almost completed Hoffman kiln around October 1911. Two of the bogie tramway trucks are visible as well as a small 18in gauge brickworks truck used for conveying green bricks to the kiln. *Photo: Parks Victoria*

as Shafts 9 and 10 was complete by the end of March when all work was called to a halt reportedly because of a need for more funding.[37] Work was never to restart as a decision to use rope haulages in the Central Area removed the need for the railway siding for coal traffic whilst the export of bricks, as we shall see, never eventuated.

Construction of the Hoffman kiln

The contract for the construction of the Hoffman kiln was let to McIntosh Harford on 3 April 1911.[38] It called for all red bricks to be provided to the contractor and as a consequence the Scotch kilns returned to service during April following the commissioning of the steam press.[39] Work commenced immediately but within weeks it was clear that serious problems were afoot. The quality of brick coming from the kilns was poor. Only good quality bricks were to be used for the new Hoffman kiln with the rest to be sold for use in the construction of Wonthaggi buildings.[40] In June the contractor, citing poor quality bricks and a lack of supply, asked for the contract to be cancelled and to be paid out.[41]

All work stopped for a month while matters were addressed. In late June, Broome announced that the contract had been cancelled but that Harford would remain on site as foreman in charge of the works. Overall responsibility for construction passed to the Railways Department through the State Coal Mine.[42]

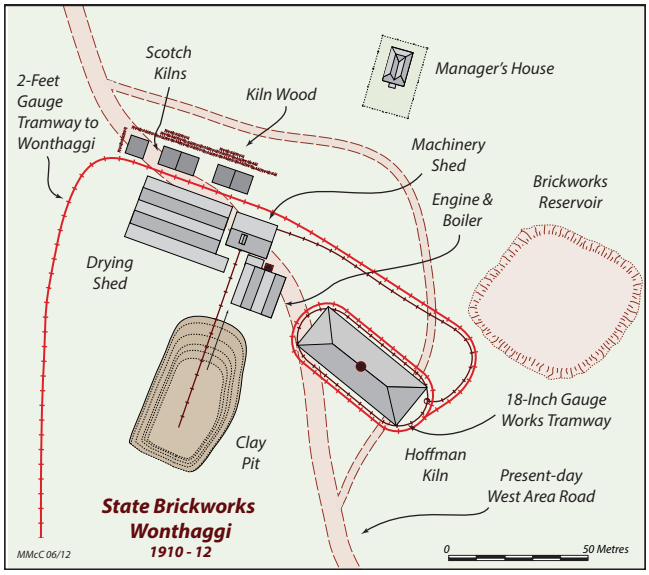
The two Scotch kilns could not hope to keep up with demand, especially given the failure rate of bricks coming from them. The number of kilns was increased to five in an effort to address the problem and operations were extended to two shifts spanning 7am to midnight.[43] However the cracking being experienced in the bricks was not the only problem. The clay being used was very wet and clogged up the machinery. The reality was that the plant was purchased to process the clay found at the original site in the township. It was well suited to the dry-pressed method of brick manufacture where the clay is forced by a powerful steam press into steel moulds before firing. The clay being dealt with was nothing like that found at the original site. The plant was constantly stopped to clear clogging of its screens and clay quarried in wet weather needed a long time in the drying sheds before it could be of any use.[44]

The additional Scotch kilns and the extra shift nevertheless had a major impact on output. Production increased to 100,000 bricks each week, up from the 30,000 previously achieved.[45] Obviously a large percentage of this was of poor quality but, regardless, the number of usable bricks increased substantially, enabling work on the new Hoffman kiln to proceed at pace. The expansion also took into account expert advice that ominously pointed to the inadequate firing being achieved using the local coal. A change was made to firewood to address the problem.[46]

Other problems in town

Unfortunately, problems were also arising in town and on the tramway. The railway station[47], post office, picture theatre and other buildings all needed bricks urgently for their construction and the brickworks were under pressure to supply. Blower declared to Broome that he could not take orders because all first grade bricks were being diverted to the Hoffman kiln and, more recently, to the power station site. He wanted a moratorium on the supply of bricks for other purposes until the new kiln was commissioned. This, of course, only applied to first grade bricks. Lower grade bricks were, sadly, in plentiful supply but with consequences. Atkinson, a local saddler, wrote to the Mine Manager refusing to take delivery of bricks that were stacked alongside the tramway near the depot intended for him because they were of such poor quality.[48]

After taking over the tramway contract Keighley soon understood the problems that the McRaes had faced. In October 1911 he complained that he hadn't carted any bricks over the line for three weeks. His two horses were idle and he requested other work for them until traffic on the tramway picked up.



Consequently he was given the task of back-loading bricks over the extension from the Scotch kilns to the Hoffman kiln at 9d per skip. This didn't solve the problem so his contract was expanded to include offloading and stacking bricks at the depot. He received an additional 8d per 1000 bricks for doing this.[49]

Work on erecting the Hoffman kiln was completed in late October 1911.[50] It was a handsome structure skilfully put together by experienced tradesmen but a large quantity of the bricks used in its construction was the best of the seconds produced by the Scotch kilns. There just was not a sufficient quantity of first-grade bricks produced to allow better material to be used.

Green bricks were carried from the brick presses over an 18in gauge tramway that encircled the structure and linked it with the presses in the machine shed. In the week following completion, the 2ft gauge export tramway was also extended to encircle the new kiln.[51]

Opening of the Hoffman kiln

The fires in the Hoffman kiln were lit for the first time on Saturday, 11 November 1911 by Blower's wife.[52] As much as she most certainly had a significant stake in its success, it is telling that the task was left to the manager's wife and did not involve a politician, a senior Government or even a State Coal Mine official. In fact all senior staff, Broome included, were notable by their absence. Equally, reporting of what should have been a major event for both Wonthaggi and the state was virtually non-existent. It seemed everyone of importance was keeping as much distance from the project as possible.

And it was easy to see why! Brickmaking out of the Scotch kilns had hardly been a resounding success! Why would bricks from the Hoffman kiln be any different? The kiln was opened for the first time on Monday, 27 November 1911 and despite the absence of success to date the disappointment was nevertheless profound. Most of the bricks had cracked and steam out of the ground had damaged three of the chambers. The first round of bricks was a failure. The mixture of clay and sand was modified for the second round and hopes were high that this would solve the problem, but to no avail.[53]

Suffering poor health, and by now probably sensing the inevitable, Blower resigned on 30 January 1912.[54]

In early February 1912, Sydney Hutton, Manager of the New South Wales State Brickworks, was asked to undertake an independent inspection of the operation.[55] He concluded that the clay was not suitable for brickmaking, the machinery in use was not appropriate for the type of clay in the broader area and the bricks were not being subjected to a sufficiently high temperature using the local coal. His suggestion that the use of the wire cut process may give better results because of the moisture in the clay was followed by the purchase of new machinery and apparatus.[56]

The purchase of the equipment underlined the poor planning and testing that had marked the fiasco from the beginning. Within days of the machinery arriving, the decision was made to abandon the new kiln. The principal reason for this must have been the inadequate heat being achieved

State Coal Mine Power House under construction in 1911. The bricks for its construction came from the State Brickworks. In this scene the brick foundations for the boilers are well underway. The 2ft gauge tramway that carried bricks to the site can be seen in the middle of the scene with a bogie truck ready to be unloaded. *Photo: Parks Victoria*

The completed power house with the locally produced bricks in strong evidence. The 2ft gauge siding that brought bricks to the site has been removed. The line to the store crosses the bridge in the foreground. The broad gauge sidings that terminated here to the left of the powerhouse have been replaced by the single line for coal delivery at the rear, dating this image probably late 1914. Photo: Wonthaggi Historical Society

from the local coal. The kiln could not function as designed without using coal as fuel. If coal could not be used because of an inadequate calorific value, the kiln was practically useless.

The Hoffman kiln ceased full time operations on 17 February 1912, having operated for a mere three months and having produced only a small quantity of usable bricks from the thousands of green bricks fired. The bricks it produced were inferior to those from the Scotch kilns despite the latter having been declared a failure! All work would have stopped there and then if it weren't for the power house then under construction. Circular bricks were needed for the chimneys so the Scotch kilns were recommissioned to provide these.[57] The workforce was cut back to around five or six men and experimentation with the clay continued along with a search for a better source.

Success, however, was to be found not far away. A new clay deposit of superior quality was found in the State Coal Mine pony paddocks about 1½ km west of the brickworks. Hope had all but been given up on the clay found in the pit at the plant. Broome proposed extending the 2ft gauge tramway to the new site and acquiring "two Krupp locomotives" to carry the clay to the plant at a cost of £2000.[58] The Public Works Department was approached about the availability of at least one such locomotive but without success.[59]

Tests using the Scotch kilns reportedly showed good results using the pony paddock clay but it was all too late. The Government had expended £9935, a huge amount for the time, on establishing the plant and more on its operations. It actually approved the additional expenditure to construct the tramway extension[60] but the work did not proceed. Sensible heads decided enough was enough. Those who overturned the Cabinet decision were not prepared to spend more on what was clearly a futile endeavour. The cost of brick manufacture at the State Brickworks at this time was 60s per 1000, comparable with the cost of bringing bricks from Melbourne. In addition, Edeson, Utting and Co had established their own Scotch kilns on a good bed of clay elsewhere in Wonthaggi and were successfully meeting much of local demand at a lower cost. The State Brickworks had failed in its objective of reducing the cost of bricks at Wonthaggi and would never be in a position to compete with the brick cartel. On 13 June 1912, after the bricks needed for the power house chimneys were provided, the remaining small workforce was paid off and all work ceased.[61]

A couple of attempts were made to revive the operation including one which involved prominent Ballarat brick maker Robert Selkirk. He planned to fire the Hoffman kiln with wood but operating parts of it as Scotch kilns.[62] He brought three of his men from his Ballarat works and produced 25,000 good bricks using a Scotch kiln and clay from the pony paddocks but no matter how it was analysed the operation could not show hope of commercial success. The plant would either need to be moved closer to a new pit or would need the benefit of the tramway extension and the purchase of a locomotive and trucks in order to function efficiently. The cost of production would then be higher than bringing bricks from Melbourne. Furthermore, the government removed the requirement on local businesses to build in brick which reduced the potential market for the output to a negligible number. The government was not prepared to throw good money after bad.

Even the concerns regarding the perceived lack of competition in the brick industry offered little or no support for the continuance of operations. The Royal Commission was to find that although a cartel existed that behaved uncompetitively, not all brick makers were part of it and Melbourne residents were paying less for their bricks than all the other state capitals![63]

In February 1914 the equipment and fittings at the works were offered for sale and over the following months all was sold.[64] All, that is, with the exception of the 2ft gauge tramway and its trucks.

The west end of the tramway was to continue in use for up to three years after the closure of the brickworks, providing a useful connection between Shafts 9 and 10, and the workshops/stores complex situated near Shaft No.3. Prior to this the tramway was threatened with major deviations with respect to the Railways housing estate between Baillieu and Campbell Streets[65] and because of the decision not to proceed with a railway connection to Shafts 9 and 10. A skip haulage was to be installed instead to take the coal across to the brace at Shaft No.5. The haulage cut across the alignment of the brickworks tramway.[66]

It seems the deviation between Baillieu and Campbell Streets was constructed although it is unlikely that it saw any traffic.[67] No evidence in documents or on the ground points to the diversion around Shafts 9 and 10 having been built. The brickworks were experiencing their death throes at the time and it would seem that common sense in this instance prevailed. On the other hand it is possible that the tramway was extended in 1913 to the entrance of the McBride Tunnel at the north end of the central mining area. Broome had the view that it would be useful to move mine timbers from the store to the worksite much in the way that it was serving Shafts 9 and 10.[68] If it did occur it would have been short-lived as the location of the store was to change in the following two to three years when, along with the rest of the Shaft 3 sidings, the connection that served the store was removed to permit mining beneath them.[69]

The removal of the store would almost certainly have meant the end of operations over the tramway.

The dismantling of the line probably occurred in piecemeal fashion. There is a report of track being removed in Drysdale Street, near the State School, in May 1914[70] but precious little else. More than likely the trackwork between the junction with the tramway to the power house and the town was removed around 1915. The State Coal Mine didn't delay in recovering materials in those days and in this case the rails would have been very useful in what was then a rapidly expanding mining operation.

Very little evidence of the Brick Works tramway can be found today. Road works, development and collapsed ground from mining operations have conspired to make this so. The exception is the area immediately south of the former Brick Works where the two feet gauge tramway formation is still easily found as was seen on 27 July 2009. *Photo: Mike McCarthy*

The tramway today

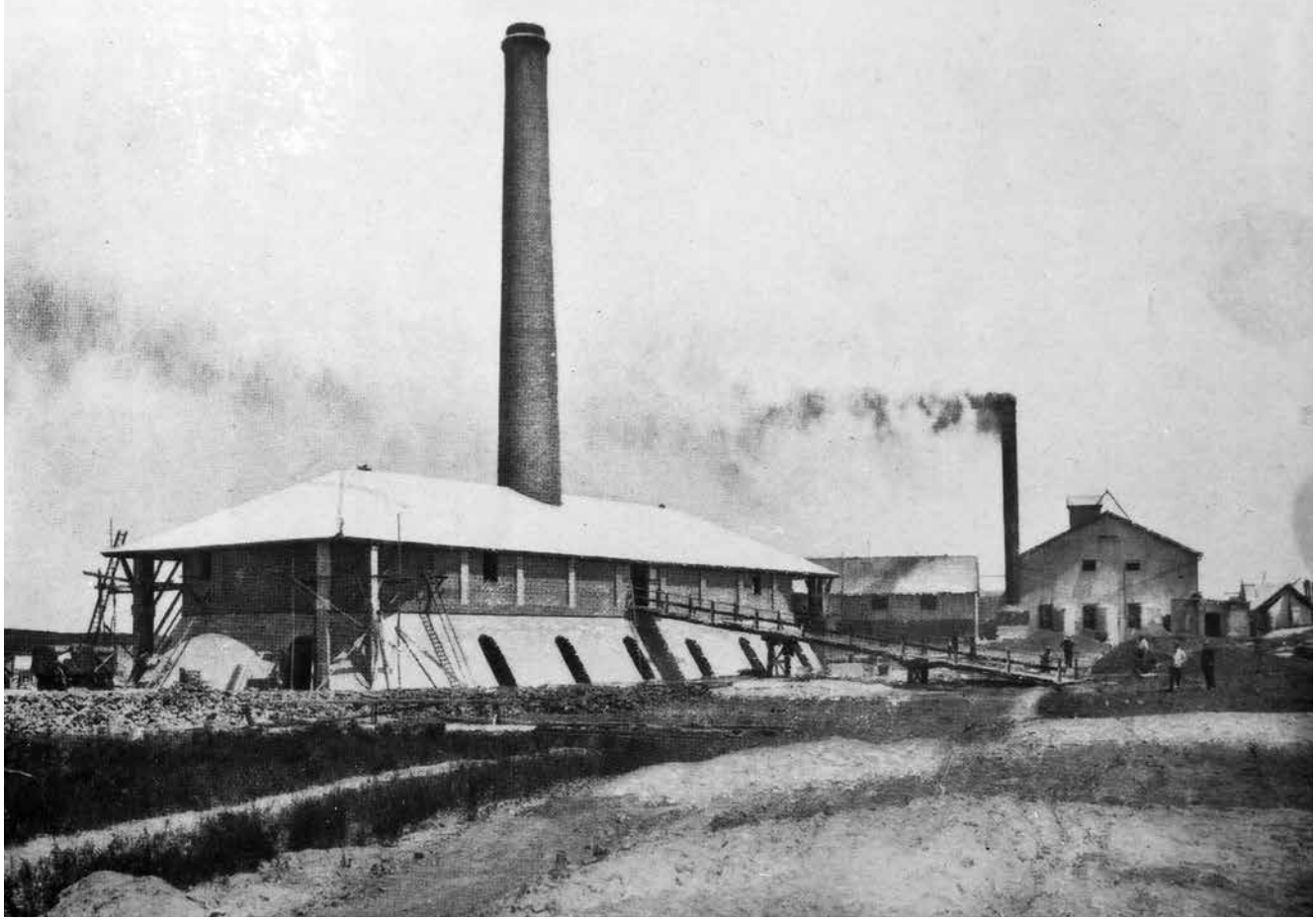
There is little to show today that there was once a brickworks and a tramway that linked them to Wonthaggi. Obviously it is difficult to get rid of a large hole in the ground! For this reason the reedy pond to be found north of the remnants of Shafts 9 and 10 provides the most tangible evidence of this flawed and failed attempt at brickmaking at Wonthaggi. The West Area road that was probably built in the 1930s cut through the site of most of the structures including the kilns. The reservoir built for the works boilers is still there but both devoid of water and covered in vegetation. A scattering of shattered bricks about the site gives evidence of its former use as well as, most probably, the prime reason for its demise. A clearing and some building rubble mark the site of the brickworks manager's house which managed to survive until at least the 1950s.

The formation of the tramway is clearly apparent where it skirts the flooded clay pit and butts into the built-up surrounds of Shafts 9 and 10. The scattering of broken bricks along the right-of-way removes any doubt. On the opposite side of the mines the formation re-emerges in a very obscure manner within the confines of a small gully and passes around the hillside, mostly hidden these days by the long grass. Aerial photos taken in 1950 clearly show the alignment where it crosses open countryside to join the road easement at the west end of Campbell Street but little evidence can be found on the ground today. The change is most probably due to collapsed ground in the area arising from the long-closed mining operations along with revegetation efforts over recent years. The exception is a small section of formation just off Campbell Street and crossed by the walking track that circumnavigates the area. Nearby may be seen the roughly formed alignment of the original, proposed but never completed, railway siding dating from 1910.

Along the road to Wonthaggi nothing of any certainty can be found although some disturbance in the sandy hillock midway to town looks suspiciously like a formation.

The State Brickworks at Wonthaggi were a complete unmitigated debacle. They failed because of hopelessly inadequate planning and testing but principally because the local coal could not produce the heat needed to fire the bricks adequately. Clay was a problem only because of the inadequacy of the work undertaken about where to place the works. Good clay was available in the area. Any first-class bricks that were produced went into the ill-fated Hoffman kiln and the power house. Within the town, Atkinson's saddlery and probably the Rifleman's Club were built using second-class bricks from the works. Neither building survives to this day. Possibly another structure or two were also built along with chimneys in miners' cottages[71] but, despite early intentions, none of the public buildings in Wonthaggi featured bricks from the State Brickworks.

The decision by McBride to shift the plant from the very suitable clay on Reservoir Hill was significant to the extent that Scotch kilns erected there would have produced good bricks that would have seen many structures constructed from them including public buildings about town. Many of these would probably have survived to this day. However a Hoffman kiln using local coal erected there would still have failed and the works in any case would have been unlikely to have survived beyond the initial burst of construction activity associated with the establishment of the town. With respect to introducing competition against the brick cartel the outcome most certainly would have been the same as that which eventuated. Even under the most favourable of outcomes the idea was fanciful at best.



Works photo looking to the west probably in October 1911. 2ft gauge bogie trucks visible at left. *Photo: Wonthaggi Historical Society*

Other than the power house, sans its two squat chimneys, the scant remains of the tramway and the abandoned, unused railway formation, the only significant pieces of remaining evidence that the brickworks existed are the overgrown reservoir and the flooded clay pit within which, more than likely, lies the dumped remains of the very elegant but short-lived Hoffman kiln.

Acknowledgements

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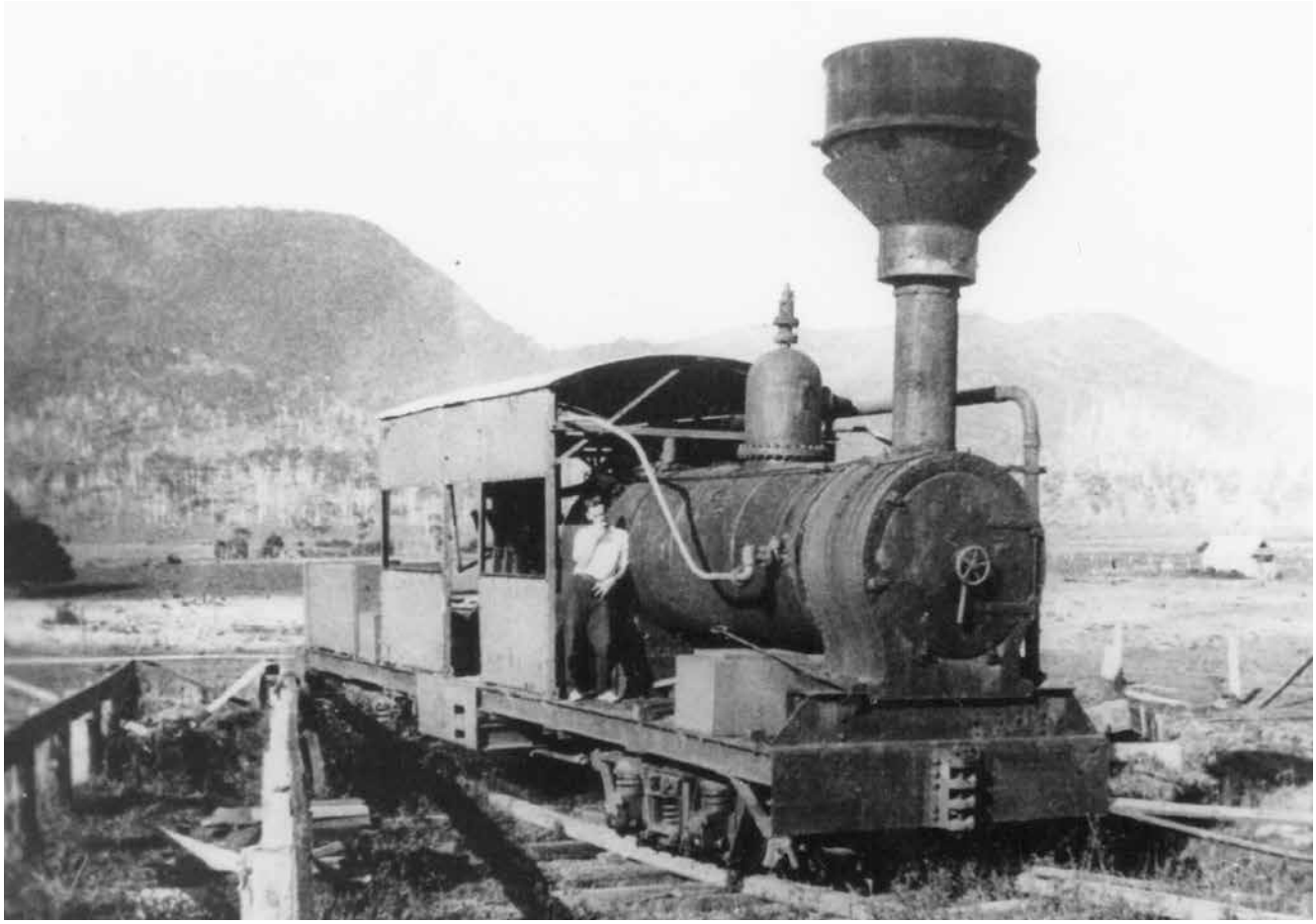
References

1. Stuart, I.M. 1987 *A History of the Brick Industry in Victoria 1826-1920.* Australian Archaeology 24:36-40
2. *The Argus*, 27 June 1904
3. *The Argus,* 15 February 1905
4. *The Argus,* 14 February 1905
5. *The Argus,* 23 August 1905
6. *The State Coal Mine at Wonthaggi 1909–68*, Jon Sleeman,Wonthaggi and District Historical Society, 2008
7. *The Argus,* 17 November 1909
8. *The State Coal Mine at Wonthaggi 1909–68*, Jon Sleeman,Wonthaggi and District Historical Society, 2008
9. *The Argus,* 17 November 1909
10. *The State Coal Mine at Wonthaggi 1909–68*, Jon Sleeman,Wonthaggi and District Historical Society, 2008
11. *The Argus,* 16 March 1910
12. Royal Commission on the Brick Industry, Minutes of Evidence 12 March 1914
13. *Wonthaggi Sentinel and State Town Miner*, 21 October 1910
14. *ibid*
15. Royal Commission on the Brick Industry, Minutes of Evidence 12 March 1914
16. *ibid*
17. *ibid*
18. *ibid*
19. VPRS 10028 Unit 3 F9
20. Royal Commission on the Brick Industry, Minutes of Evidence 12 March 1914
21. *Powlett Express* 2 September 1910
22. VPRS 10028 Unit 3 F9
23. *Powlett Express* 9 October 1910
24. VPRS 10028 Unit 13 F57
25. VPRS 16791 P0001 F66
26. VPRS 16791 P0001 F74
27. VPRS 421 Unit 73
28. VPRS 10028 Unit 31 F174
29. VPRS 10028 Unit 13 F57
30. VPRS 10028 Unit 91 F544
31. *ibid*
32. VPRS 10028 Unit 13 F57
33. VPRS 10028 Unit 49 F251
34. VPRS 10028 Unit 139 F209
35. *ibid*
36. *ibid*
37. *Wonthaggi Sentinel and State Town Miner*, 31 March 1911
38. VPRS 10028 Unit 140 F212
39. *Powlett Express* 21 April 1911
40. *Powlett Express* 30 June 1911
41. VPRS 10028 Unit 40 F212
42. *ibid*
43. VPRS 10028 Unit 38 F203
44. *ibid*
45. *ibid*
46. VPRS 10028 Unit 13 F57
47. VPRS 10028 Unit 91 F544
48. VPRS 10028 Unit 29 F164
49. VPRS 10028 Unit 139 F209
50. VPRS 10028 Unit 38 F203
51. *ibid*
52. *ibid*
53. *ibid*
54. VPRS 10028 Unit 40 F213
55. *The Argus,* 19 February 1912
56. VPRS 10028 Unit 38 F203
57. *ibid*
58. *ibid*
59. VPRS 967 Unit 42 12/3291
60. *Powlett Express* 12 July 1912
61. VPRS 10028 Unit 3 F 9
62. VPRS 10028 Unit 128 F130
63. *The Argus,* 21 October 1914
64. VPRS 10028 Unit 123 F709
65. VPRS 421 Unit 73
66. VPRS 10028 Unit 13 Item 56
67. Aerial Photography 1950
68. VPRS 10028 Unit 177 F924
69. *ibid*
70. VPRS 10028 Unit 3 F9
71. State Mine Cash Book held by the Sate Mine Museum

While it is normal practice in 'Light Railways' to provide distances in historical articles in the original (imperial) measurements, in this case the author has determined the course of the tramway using contemporary on site survey methods and so the relevant measurements are expressed in metric terms.



The Final Flutter, *Tulloch's home-made standard-gauge geared steam locomotive at Mount George sawmill. It weighed over 36 tons and was too heavy for the wooden-railed logging tramway and apparently broke 14 rails and 28 sleepers during its first and only trial on the line in 1925. An extra chock has been put between the sleepers to support the wooden rail under the leading bogie's trailing wheel. An NSWR goods truck can be seen on the mill's private siding just behind and to the right of the locomotive. Photo: P Sellars courtesy of Jim Longworth*

The Rhodes Timber Company, Mount George, NSW

Part 1: Mount George sawmill and the Woolshed Creek logging tramway

by Ian McNeil

Foreword

Rhodes Timber Company was set up in the closing stages of World War I by Tulloch's Phoenix Ironworks, a large engineering company based in the Sydney suburb of Rhodes. Its primary business objective was to supply hardwood timber for use in the construction of thousands of railway goods trucks that Tullochs built for the NSW Government. Timber operations were based at Mount George, a small village on the NSW North Coast Railway.

Rhodes Timber was always something more than just another timber firm. In an era when the NSW Forestry Commission was developing road-based logging in State Forests and recouping costs through timber royalties, the company was still putting in bush sawmills and logging tramways well into the late 1930s.

The Company's timber tramways also set it apart. Wooden-railed standard-gauge log lines featured ferocious grades, hair-raising descents and a wonderful mix of motive power which included converted road lorries, home-made steam locomotives and the only Nattrass rail tractors used in NSW.

Mount George

Mount George today is a quiet country village in the hinterland of the NSW mid-North Coast, 340 km north of Sydney by rail. The little community and the rural properties around it occupy fertile river flats in the upper Manning River valley. North of the village, the steep timbered hills of the Knorrit State Forest reach up to 700 metres above sea level.

White settlement of the Mount George area was slow to develop due to its relative isolation. The head of navigation on the Manning River was over 20 miles downstream at Wingham, while all the land south of the river was locked up inside the Australian Agricultural Company's giant Port Stephens Estate.

Pioneer settler Isabella Kelly attempted to found the private town of Georgetown on her estate, but her first and only auction of town blocks in 1842 failed to attract a single buyer. Development of the area only really began after the NSW North Coast Railway came through in 1913.

The forests above Mount George contained a wealth of prime quality hardwood eucalypts – blackbutt, ironbark, Sydney blue gum, tallowwood and brushbox being the principal species. Riley Hawkins put in the first sawmill to exploit this timber when the railway arrived, and the little settlement of Wyoming grew up around his mill two kilometres west of Mount George railway station. Further development was delayed by a general depression in the timber industry during the First World War.

By the mid-1920s Wyoming was in decline while Mount George had grown into a bustling little village. It boasted a police station, school, post office, School of Arts, general store,

butchery and two boarding houses. Its busy railway station handled large quantities of timber and agricultural produce, especially citrus, and warranted a station master as well as a porter.

Rhodes Timber Company

Tulloch's Phoenix Ironworks Ltd (Tullochs) was a large engineering company founded by Scottish immigrant Robert Tulloch. His company began operations in the inner Sydney suburb of Pyrmont in 1885 and moved north to suburban Rhodes in 1913. The company won substantial contracts to build rolling stock for the NSW Government Railways including hundreds of standard gauge 4-wheel goods trucks. The first vehicles of this type were fitted with steel floors which proved unserviceable in traffic. Hardwood timber was then specified for the floors and sides of these versatile 15-ton capacity goods wagons for its wear-resistant qualities and easy and economic replacement when necessary. Tullochs could not obtain satisfactory prices for the necessary hardwood and decided to make arrangements to cut and mill its own.

Tulloch set up a wholly owned subsidiary called Rhodes Timber Company in 1918, though for some reason it was not registered under the NSW Registration of Firms Act 1902 until 19 September 1927. Robert Tulloch had taken note of the splendid hardwood forests in the district when his company was constructing the nearby steel railway bridge across the Manning River in 1912. After the war he began investigating sources of supply for his timber. Bundook and Moorland, both railway stations on the NSW North Coast Railway were initially considered but Mount George was selected as the best option. In 1920 Robert's son, John William Walker Tulloch, acquired 2560 acres of forested Crown Land in the rugged ranges around the headwaters of Woolshed and Connelly's Creeks, some 5 miles north of Mount George. [1]

Rhodes Timber Company Sawmill at Mount George

Initially Rhodes Timber Company operated out of Tulloch's engineering works at Rhodes in Sydney. By early 1920 the company had begun construction of a hardwood sawmill beside the North Coast Railway line, about 500 metres west of Mount George railway station. Some 200 local residents and invited guests attended the formal opening of the mill on 19 March 1920. Celebrations continued into the evening with a dance put on by the company at Duncan McPherson's hall at Wyoming sale yards. The grand event was covered by a *Manning River Times* correspondent who penned this description of the new sawmill: [2]

Mr. W. J. Sinclair, manager, gave a brief outline of the mill. The plant consists of one 16hp engine driving two circular saw benches and a swing cross cut, with live rollers to carry the timber from No. 1 bench. A 12hp winch is in use for hauling logs on to the frame and table top bench. The saw doctoring branch is driven off a small counter shaft, from the main engine, and the whole is supplied with steam from one of Mr. Tulloch's own make of colonial boilers, 27hp. The water is pumped from the river over ¼ mile distant with suitable engine and pump into a 3,500 gallon wrought iron tank at the mill. The Company intend putting a traction engine into use to haul logs together with their own teams to keep the mill supplied. The plant when completed will cost nothing less than £10,000 pounds, and is one of the most up to date in the state.

By early May 1920 the sawmill was loading one railway truck of sawn timber a day at Mount George station. The afore-mentioned traction engine arrived at Mount George shortly afterwards, a large Aveling & Porter which came with a number of trailers built by Tullochs to carry logs. It was a wood-burner, and cutters were employed to cut and stack firewood at suitable locations along the comparatively level valley floor.[3] The traction engine was too heavy for the unformed roads on the black soil creek flats and was soon retired. The mill then relied upon bullock teams until the tramway began operations in the following year.

In late 1920 the company began building a number of houses for its workers at Mount George. Eventually a dozen or so modest cottages lined the main road west of the sawmill, about one kilometre from the railway station. This became known as "the Tulloch end of town" or more commonly "Tulloch Town" to put it at arm's length from the more respectable part of the village. According to local tradition it had a reputation of being very much on the wild side at times.

A private rail siding costing £1060 was brought into use for the sawmill on 26 October 1922. [4,5] It was a short loop siding with 275 feet of standing room at mileage 112m 44ch from Maitland, parallel to the main line but with no physical connection to the Company's standard gauge wooden-railed tramway. It is not known why the company wanted its own private siding, when Mount George railway station with its goods siding and timber loading facilities was only a short distance away.

The sawmill came to notice a year later when at midnight on Thursday 23 November 1923 it was destroyed by fire. The local police concluded the fire was accidental. According to one newspaper report the mill was uninsured, meaning a loss to the company of some £8000. Despite this setback, the mill was soon rebuilt and back in operation. [6]

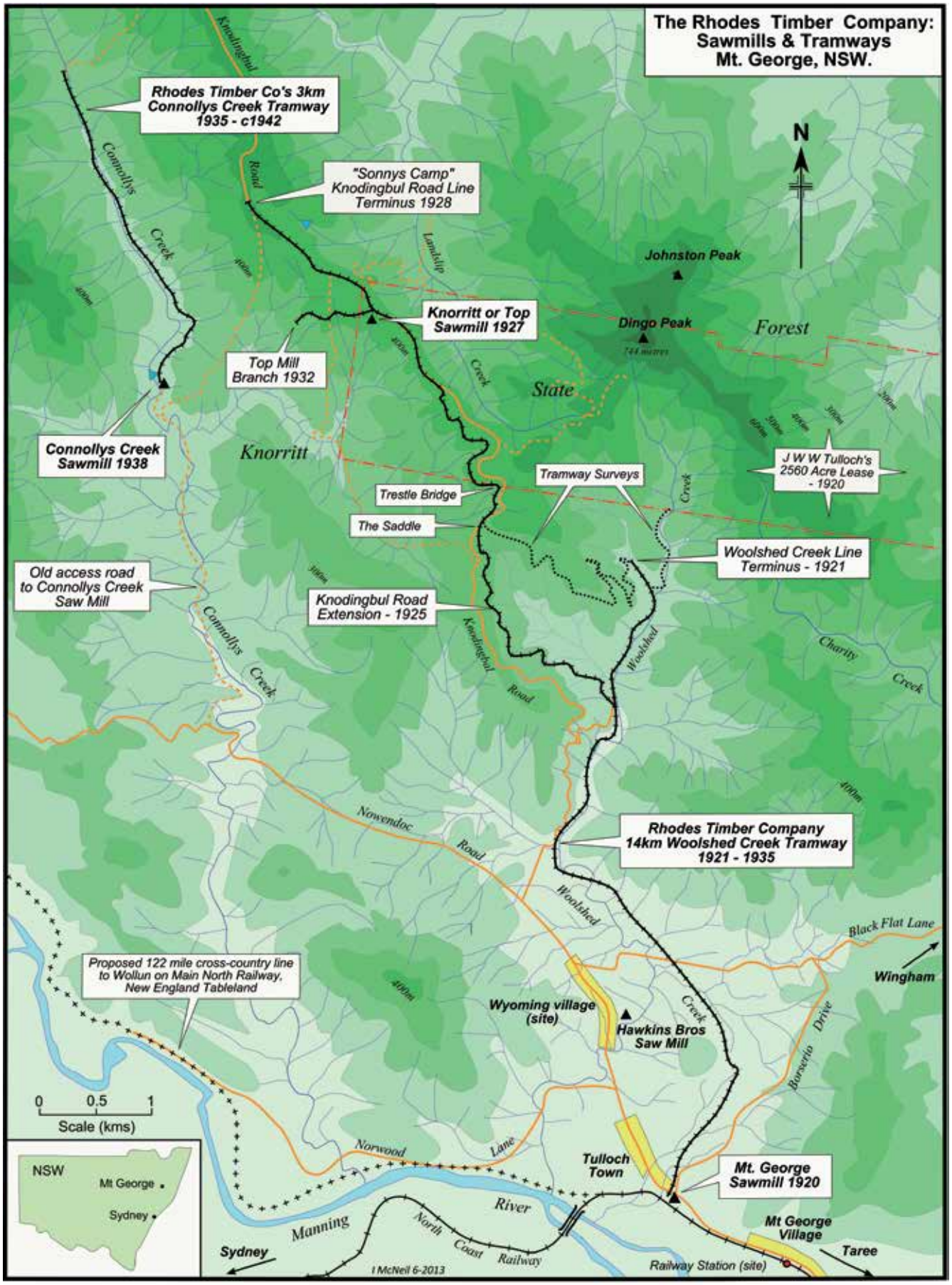
The first mill manager was William Jesse Sinclair, an energetic, articulate and talented individual. He is credited with overseeing the construction of the mill and logging tramways and was an enthusiastic promoter of the proposed cross-country railway line from Mount George to Wollun on the New England Tableland. He also possessed a fine singing voice which he put to good use at the many local concerts and dances held at Mount George. He was a hands-on individual and is said to have been the first man to trial the risky practice of free-wheeling loaded log trucks down the steep Knodingbul Ridge grades. On another occasion he got too close to the action inside the sawmill:

When Mr. Sinclair, manager of the Mt. George sawmill, was placing a belt on a pulley his clothes caught, and he was carried on to the shafting. He held himself back with all his strength until his clothes were torn off, and he was left with only his boots and socks and the collar band of his shirt. By his clothes giving way Mr. Sinclair was enabled to release himself after having received a number of bumps and bruises. [7]

By 1930 Albert Sorensen had replaced William Sinclair as manager and he stayed on until the Mount George mill closed in 1938. Milling operations were transferred to Connollys Creek and managed by John Keppie until Rhodes Timber Company pulled out in 1942.

Rhodes Timber Company cut hardwoods at its Mount George sawmill, principally blackbutt, blue gum, tallowwood and ironbark. Its primary customer was parent company, Tulloch's Phoenix Ironworks. During the 1920s and 1930s Tullochs constructed several thousand S, K and U-type 4-wheel goods wagons for the NSW Government Railways. K and U wagons had hardwood floors while S wagons also had metal-framed wooden sides. Several hundred bogie freight wagons of various types were also constructed.

The company also tendered to supply timber to local government entities including the Sydney City Council's lucrative wooden paving block contracts (1922), tallowwood for the Sydney Metropolitan Water Sewerage and Drainage Board (1927), and brushbox decking for the Sydney Harbour Trust (1929). Another outlet was cutting close-grained Spotted Gum timber for the handles of Tullochs extensive range of shovels, spades and forks and trowels.



Above: *The Rhodes Timber Company built three sawmills and two logging tramways at Mount George, NSW. Logs were drawn from rugged hills and deep valleys within the Knorrit State Forest while sawn timber was railed to parent company Tulloch's Phoenix Ironworks at suburban Rhodes in Sydney.*
Right: *The standard gauge composite Fowler steam locomotive at the Tullochs works at Rhodes. It was made by cannibalising three 2ft 6in gauge John Fowler jackshaft drive 2-4-0T locomotives acquired from the defunct Cobar copper mines. Its steaming ability was said to be so poor that it ran out of steam less than half a mile into its first trial at Mount George in 1921 and was sent back to Rhodes. Photo: Jim Longworth collection*

The mill could put out as much as 80,000 feet a week, but getting enough timber to fill orders was always a challenge. Most of the 2500 acres of forest at the head of Woolshed Creek acquired by John Tulloch was in steep rugged country inaccessible by tramway. The best timber was on the west side of Knodingbul Ridge, around the headwaters of Connollys Creek. As a result the mill lay idle from time to time, and in later years manager William Sinclair confided that the company had never been able to keep the mill adequately supplied with logs.

Rhodes Timber Company's Woolshed Creek logging tramway

Shortly after establishing its sawmill the company began construction of its first logging tramway with the *Gloucester Advocate* reporting on progress in August 1920:

"*The Rhodes Timber Company have decided to construct a tramline from their sawmill at Mt. George to Connolly's Creek, and already a beginning has been made with the work of clearing the track, splitting sleepers, etc. About 4 miles of line will be built at first running through the properties of D. Cameron, A. Kennedy and D. McPherson. By this means a plentiful supply good timber will be secured*." [8]

The company's tramway first crossed private property north of the village, then Crown Land around the upper reaches of Woolshed Creek and finally Knorrit State Forest high up on Knodingbul Ridge. Presumably suitable agreements were negotiated with private landholders for rights-of-way across their property, but crossing Crown Lands required a government lease. In November 1920 the company applied to the NSW Lands Dept for Special Lease No. 1920-64 Taree, which was granted on 1 October 1921. [9]

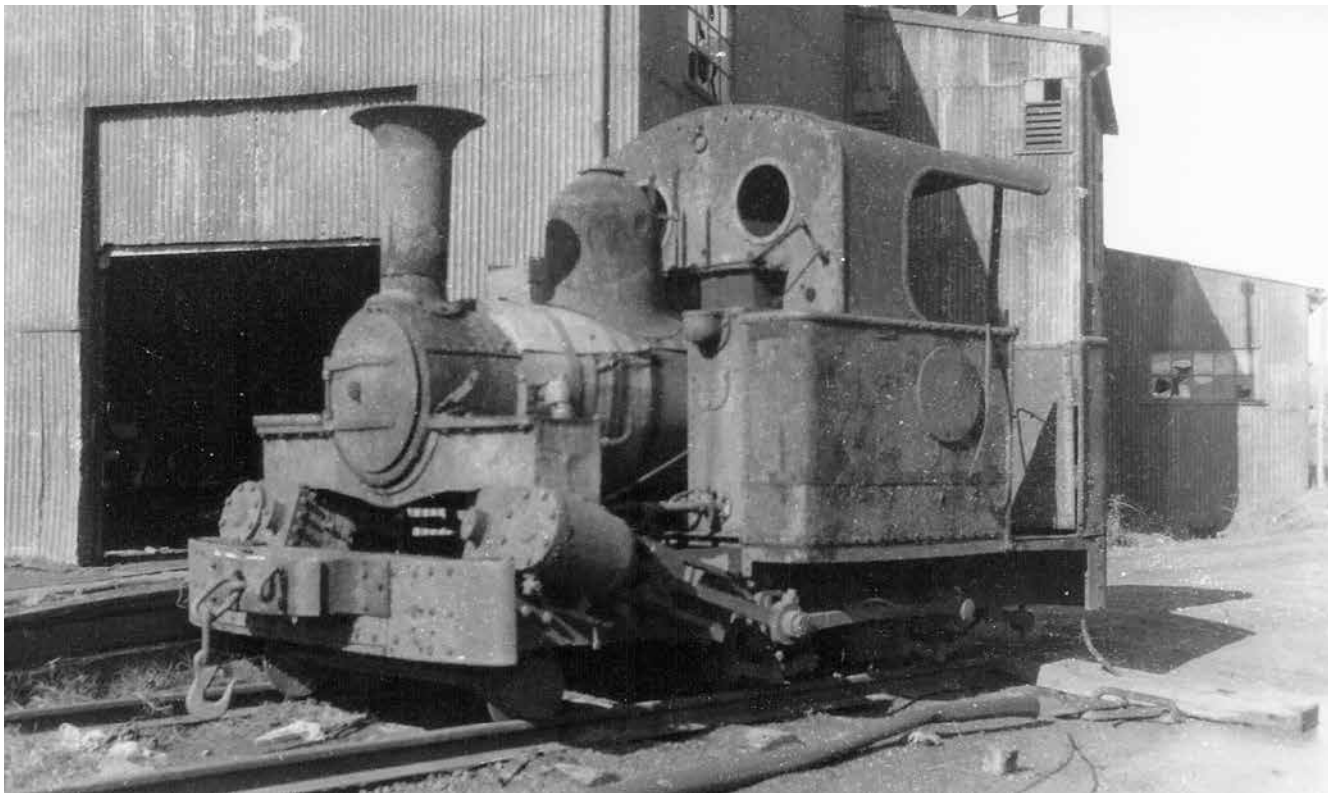
In June 1922 the necessary survey of the proposed route across Crown Land was carried out by Taree surveyor Mr DA Sharpe. His survey recorded a route pegged out along Woolshed Creek and on up Knodingbul Ridge via an ambitious zig-zag formation. A shorter branch was surveyed on up Woolshed Creek to the southern boundary of Tulloch's forest leases. [10]

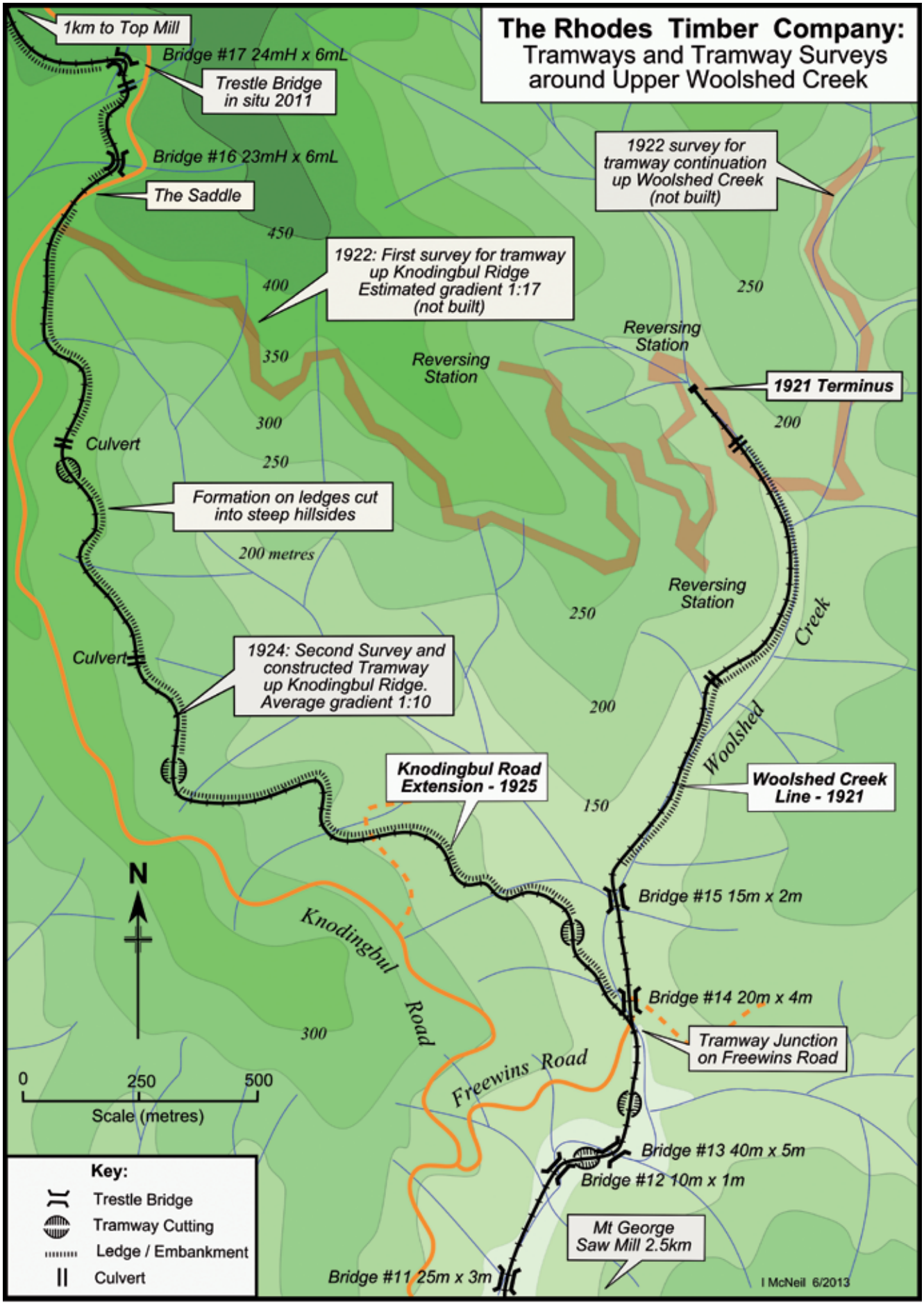
It was reported that a large number of men were employed on tramway construction but that progress was hampered by continuous wet weather, an occupational hazard on the mid-North Coast. It wasn't until July 1921, some 12 months later, that the first four miles of tramway were completed. The line was built to standard gauge (4ft 8½in – 1453mm) with 4in x 4in wooden rails nailed onto wooden sleepers. Later extensions were built with heavier 5in x 5in brushbox rails.

At Mount George the tramway left the sawmill and almost immediately crossed Nowendoc Road. Steel rails were used for the crossing so as not to interfere with road traffic. It bisected the gap between the present day School of Arts and Mount George Motors and ran alongside the school fence, where Borserio Drive is today. Heading north the line crossed the low rise behind the village on easy grades then continued over the black soil flats beside Woolshed Creek. About 5km north of the mill the creek valley narrowed sharply and the tramway began to criss cross the creek on its way upstream. A series of ledges was cut into the hillside to accommodate the line which terminated in a steep-side gorge at the base of the proposed zig-zag. Overall this first part of the tramway formation was wide and well-constructed with broad curves and easy gradients.

Three years passed before construction began on the next stage of the tramway, the long climb up Knodingbul Ridge. It appears that Rhodes Timber Company was not satisfied with the zig-zag route first surveyed in November 1922 for this section. Had it been built, it would have been a difficult line to operate, involving three reversing stations on steep grades averaging 1 in 17.

Surveyor Sharpe was re-engaged in December 1923 to find an alternative way up Knodingbul Ridge. His new route junctioned off the existing tramway about 4.5km from the mill, and took a more direct but very steep climb up the east side of the ridge. It rejoined the original zig-zag survey at The Saddle then generally followed the ridge line northwest on a climbing grade to a bush terminus some 12 km north of the mill. A short length of Sharpe's replacement route crossed Crown Land for which Rhodes Timber Company was granted Special Lease 1924-15 Taree on 28 November 1924.[11]





The first survey to extend the tramway from Woolshed Creek to climb Knodingbal Ridge incorporated a zig-zag with three reversing stations. This was deemed unacceptable and a more direct line was started in 1925 though with steeper grades, some as much as 1 in 7½.

The Rhodes Timber Company's standard-gauge FWD rail lorry on the log siding in front of the company's first sawmill at Mount George. The American-made four wheel drive successfully hauled logs to the mill over the lightly-graded Woolshed Creek line between 1921 and 1925. When the logging tramway was extended up Knodingbul Ridge in 1925 the FWD did not have enough tractive effort to cope with the 1:10 and 1:7½ grades and was replaced by Nattrass Rail Tractors. *Photo: ARHS Photo 931*

In June 1925 the *Gloucester Advocate* reported that construction of this stage of the tramway was underway:

The Rhodes Timber Company are extending their tramline further into the mountains in order to tap valuable timber. The new cuttings were made last year and it is expected to complete laying the rails to the mountain top in a few months when a hauler will draw the logs to the rail head. [12]

The new cuttings referred to were quite substantial. Nearly 5km of continuous ledge-work was cut into steep hillsides on an average grade of 1 in 10 on the climb up Knodingbul Ridge to The Saddle. There were a few culverts on this part of the ascent, but west of The Saddle there were five substantial trestle bridges up to 7m high. An interesting description of this part of the line line appeared in the *Manning River Times* in July 1926, when the Nattrass Rail Tractor was being demonstrated at Mount George.

The company have a tramline, with branches, penetrating into the bush for some 8 miles, and it is intended to keep on extending it through the Knorrit State Forest, which it taps, to wherever the timber is. Mr. W. J. Sinclair, who for the past 5 or 6 years has been managing this business, says there is some beautiful tallowwood, beech and blue gum in this forest, some of these aged sentinels of the wilds being of enormous girth. This tramline was put down by the Rhodes Co., which spent about £50,000 in the mill venture. Mr. D. S. Sharpe, of Taree, surveyed the line. Mr. Sinclair had charge of building the line, which, considering the most difficult country which it traverses and the large number of bridges which had to be erected, is a lasting tribute to his engineering skill. Great cuttings had to be made at numerous points in the precipitous hillside and yawning chasms had to be spanned, very often on a curve. The sleepers were cut in the adjacent forest and the wooden rails were sawn at the mill and conveyed along the line as it progressed by the company's F.W.D. (four wheel drive) rail motor. For over 5 years this motor has been doing good work for the company. The line is an exceptionally steep one. From the foot of the hill over which the rails mark the trail to the saddle in the range, which is the highest point, is a distance of 1¾ miles, the average gradient of which is one foot in ten, and in some places is equal to one in 7½. On the curves, owing to the great resistance necessary, especially when a loaded timber train is descending the hill, and, for safety, steel rails had to be installed. [13]

By 1930 the line extended a further 2km northwest on easier grades along the spine of Knodingbul Ridge to the last railhead at Sonny's Camp. Around 1932 the short 1km Top Mill branch line was put in off the main line to a log hauler site on a spur ridge overlooking Connollys Creek. There were three bridges on an easy downhill grade to the end of this line.

The history of the Rhodes Timber Company will conclude in Part 2, to be published in LR 234, the December issue of Light Railways. *It describes the unusual mixture of tramway motive power, the construction of the bush sawmills, the isolated Connollys Creek tramway, and the eventual demise of the company.*

References

1. Property ownership recorded on 1937 maps of Wyoming parish, county Macquarie, NSW.
2. *Manning River Times*, 19 March 1920
3. Gifford Eardley, Notes on Rhodes Timber Company steam locomotives, courtesy of David Jehan.
4. NSWGR Private Siding Agreement No 39109, 21 August 1922
5. NSWGR Weekly Notice No 43, Local Appendix, Northern Division, 27 October 1922
6. *Sydney Morning Herald*, 27 November 1923
7. *Sydney Morning Herald*, 27 March 1924
8. *Gloucester Advocate*, 7 August 1920
9. Special Lease No. 1920-64 Taree for tramway purposes granted to Rhodes Timber Company of Mount George, 4 acres 3 roods, from 1 October 1921 to 31 December 1928, annual rent £6, *NSW Government Gazette,* 30 September 1921, page 5649
10. Survey Plan Ms 2808 Md Taree, Taree Lands Office
11. Special Lease 1924-15 Taree for tramway purposes granted to Rhodes Timber Company of Mount George, 3 acres, from 1 December 1924 to 31 December 1928, annual rent £2.10.0., *NSW Government Gazette*, 20 November 1924, page 5308
12. *Gloucester Advocate*, 5 June 1925
13. *Manning River Times*, 24 July 1926

While it is normal practice in 'Light Railways' to provide distances in historical articles in the original (imperial) measurements, in this case the author has determined the course of the tramway using contemporary on site survey methods and so the relevant measurements are expressed in metric terms.

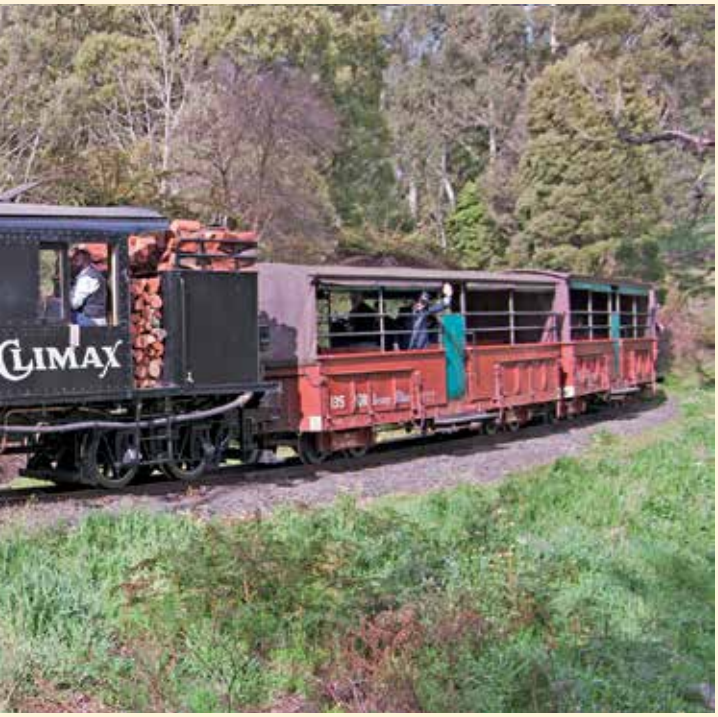
A fitting Climax

Puffing Billy relaunches 1694

Climax 1694 hauled its first revenue train since a major reconstruction on Sunday 8 September, the 85th anniversary of it entering service. A report on the trip features on page 37 of this issue.

Left: *Shortly after arrival at Menzies Creek with D21 (TGR/ Drewry V12 of 1968) in tow, 1694 prepares to run around the diesel for the return trip to Belgrave on the first of several trial runs, 21 August 2013. Photo: Frank Stamford*

Above: *On the day of the relaunch, 1694 performs for photographers at*



a walk-forward photostop which was arranged at the site of the Landslide which closed the railway in 1953. Photo: Frank Stamford

Right: *A second trial trip, this time with eight cars in tow, operated to Emerald on 22 August 2013. Due to cross the Luncheon Train at Menzies Creek, the late running special is seen ready to depart Emerald, where the trains actually met. Photo: David Gawthorn*

Below left: *Nearing Menzies Creek on its first test run, the driver seems happy with the locomotive's performance. Photo: Val Rees*

Below: *A banner commemorating both its 85th birthday and return to service is no match for the Climax at a false departure photo opportunity before the official departure from Belgrave. Photo: Frank Stamford*

Below right: *A crowd of interested onlookers watches as 1694 propels its train into the platform at Emerald prior to departing for Menzies Creek. Photo: Scott Gould*

Industrial Railway NEWS

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Special thanks to contributors to the LRRSA, and Locoshed e-groups and the *Sugar Cane Trains/Navvy Pics* 2ft Facebook page.

NEW SOUTH WALES

PACIFIC NATIONAL,
Port Kembla Steelworks
(see LR 207 p.22)
1435mm gauge
Seven dual-engined genset Bo-Bo DE locomotives have been ordered by Pacific National from National Railway Equipment Company (USA) for shunting operations at the BlueScope steelworks. It is anticipated that they will displace the English Electric type locomotives that were inherited from Australian Iron & Steel. Deliveries are expected to start in mid-2014.
International Railway Journal 11/7/13

QUEENSLAND

BUNDABERG SUGAR LTD, Bingera Mill
(see LR 232 p.18)
610mm gauge
It appears that harvesting in the Wallaville area is on a three weeks on and three weeks off roster. When visited in late August, both Com-Eng 0-6-0DH locos *BURNETT* (AH2967 of 1963) and *INVICTA* (A1513 of 1956, rebuilt Bundaberg Foundry 2001) were locked up in the compound at Wallaville. The Wallaville-based crew was starting work at Bingera using 0-6-0DH *TEGEGE* (FD4799 of 1966) for local working around the mill.
The Plasser bogie tamping machine (390 of 1994) was being used on the Wallaville line on the mill side of Sheep Station Creek.
The Walkers B-B DH *KOLAN* (633 of 1969 rebuilt Bundaberg Foundry 1996) is being used on the afternoon and night shifts again this season, and when possible is hauling 70-75 loaded bins from Fairymead to maximise its productivity. This requires the splitting of the arriving rake depending on what storage lines are available around the mill.
Lincoln Driver 8/13

LOCOMOTIVE, ROLLING STOCK & EQUIPMENT MANUFACTURERS/SUPPLIERS

IBS ENGINEERING SUPPLIES PTY LTD, Innisfail, Qld
(see LR 232 p.18)
610mm gauge
Rebuilt ex-Millaquin Mill Clyde 0-6-0DH (65-441 of 1965), named *DAMO* after IBS Managing Director Bill Seawright's son, was loaded onto road transport for Brisbane on 25 July for shipping to Fiji Sugar Corporation.
IBS Facebook page 25/7/13

BUNDABERG SUGAR LTD, Millaquin Mill
(see LR 232 p.18)
610mm gauge
The River Line connecting Millaquin Mill to the Fairymead ferry and old Qunaba Mill area was restored to traffic in early August, following severe damage to 2.5km of track in January's flood. There were two major washouts, one where a yacht ended up on the trackbed. Repairs were delayed pending road repairs by the Bundaberg Regional Council as the cane railway alignment was being used by residents to access their properties.
Five locomotives are in regular use at Millaquin. Of the EM Baldwin B-B DH locomotives, *BAROLIN* (6456.1 11.75 of 1975) and *FAIRYDALE* (10048.1 6.82 of 1982) are used for three shifts, while *CALAVOS* (4983.1 7.73 of 1973) and *VULCAN* (5317.1 11.73 of 1973) are used for one shift. Bundaberg Foundry B-B DH *ELLIOTT* (002 of 1991) is on two shifts.
Trailable points ex Moreton Mill were installed at Jimmy Sheehan's during the slack season as part of a flashing light upgrade for the Lovers Walk Road crossing. The change enables a train to enter or exit the South Kalkie branch without the flashing lights operating. On the mill side of the road crossing is a disabling key switch, which when activated by the crew, puts a 10 minute time delay on the operation of the flashing lights whilst the branch is entered. It appears that the same has to be done to exit the branch.
NewsMail 6/8/13; Lincoln Driver 8/13

MSF SUGAR LTD, Mulgrave Mill
(see LR 232 p.20)
610mm gauge
On 14 July, Bruno's bridge on Langes Branch collapsed while a locomotive was pushing empty bins across over it. Com-Eng 0-6-0DH 8 *CHARINGA* (A1926 of 1958) ended up on its side in a branch of the upper Mulgrave River, largely submerged. One crew member suffered a broken arm, but the consequences could have been much worse. The bridge remained out of commission in late August pending the outcomes of a Workplace Health & Safety Queensland investigation.
Recovery of the locomotive was a major operation which concluded on 16 July. A 200-tonne capacity all-terrain crane had to be mobilised on a site that needed to be cleared of vegetation and consolidated with rock fill before it could be used. Counterweights to stabilise the crane were brought on site by rail. Oxyacetylene cutting had to be used to separate the locomotive from the three empty bins that remained attached to it. Swift water rescue personnel were on hand to assist the riggers who had to enter the water to secure the locomotive to the lifting chain. The loco was lifted from the water by its front headstock. Amazingly it was back in service by the end of August, needing little more than drying out, an oil change, and the fitting of a replacement head gasket.
A series of commissioning trials was carried out with newly-rebuilt Com-Eng 0-6-0DH 17 *DEERAL*

Millaquin Mill's loco E.M.Baldwin B-B DH FAIRYDALE *(10048.1 6.82 of 1982) powers a rake of full bins from the Clayon/Alloway area 'over the QR' through the points at South Kalkie Junction (Jimmy Sheehan's) on 25 August. The trailable points at this junction were installed as a part of the flashing light upgrade for Lovers Walk road crossing. Photo: Lincoln Driver*

(AD1453 of 1962). Fitted with a 9-litre 5-cylinder Scania engine and Allison automatic gearbox, the locomotive pulled 100 loaded 10-tonne bins at an average speed of 16 km/h. The locomotive currently being rebuilt at Mulgrave, Clyde 0-6-0DH 13 (64-316 of 1964) will be fitted with a Scania V8 engine.

It is reported that Prof B-B DH 22 *ALOOMBA* (P.S.L.25.01 1990 rebuilt South Johnstone 1993) will be fitted with a new enlarged cab as part of its planned rebuild in the 2014 slack season.

Luke Horniblow 7/13, 8/13; Chris Stephens 8/13; *Cairns Post* 15/7/13, 16/7/13, 17/7/13; ABC News 15/7/13, 17/7/13; Scania Newsroom 22/8/13

TULLY SUGAR LTD

(see LR 232 p.22)

610mm gauge

A rail connection has been put in to link the Tully and South Johnstone systems at Atherton Road, between Silkwood and El Arish. The immediate purpose of the short link was to allow rail delivery of new 10-tonne bogie bins from the Bradken plant at Boogan over the South Johnstone Mill system. The new bins are delivered to Atherton Road by a South Johnstone mill locomotive. They have Willison automatic couplers with some equipped with a Willison at one end and a link and pin at the other to allow coupling to older rolling stock. These transition bins are identified by their yellow corner stanchions.

The new Walkers B-B DH rebuild, believed to be ex-Cooks Construction CC03 (643 of 1970), formerly QR's DH56, was substantially complete by the end of August. It was expected to enter service by the end of the season.

In the meantime, the engine of Walkers B-B DH *TULLY-7* (657 of 1970 rebuilt Tulk Goninan 1994) failed, and it was placed out of service pending repairs to a replacement engine from the locoshed.

Luke Horniblow 8/13

Top: *Mulgrave Mill's newly refurbished Com-Eng 0-6-0DH 17* DEERAL *(AD1453 of 1962) with its new cab providing enhanced visibility for loco crew, 31 August 2013. Photo: Luke Horniblow*
Above: *Tully Mill's new Walkers B-B DH conversion nears completion in the locoshed, on 31 August. Photo: Luke Horniblow.*

WILMAR SUGAR (HERBERT) PTY LTD, Herbert River Mills

(see LR 232 p.21)

610mm gauge

Victoria Mill's Clyde 0-6-0DH *INGHAM* (64-382 of 1964) was returned from Macknade on the night of 7-8 July, but had come back to Macknade to cover another breakdown by 10 July, returning to Victoria on 22 July.

On the weekend of 28 August, Macknade Mill's EM Baldwin B-B 20 (7070.4 4.77 of 1977) was sent to Victoria Mill and Macknade received Clyde 0-6-0DH *PERTH* (69-682 of 1969) in exchange. The Baldwin locomotive was put into service hauling cane from Victoria Mill's Abergowrie area, seemingly to cover a shortage because Victoria Mill's *RYNNE* (EM Baldwin 5423.1 9.74 of 1974 rebuilt N+P 2009) had still not been recommissioned following its rebuild.

On 3 August, *PERTH* was sent back to Victoria Mill with mechanical problems and was replaced by *INGHAM*.

On 11 August, Clyde 0-6-0DH *LUCINDA* (65-436 of 1965) arrived at Macknade from Victoria Mill, along with Victoria Mill's Clyde Engineering Queensland 6-wheeled brakewagon BV5 (CQ3477-1 of 1976). *LUCINDA* was to stand in on bulk sugar haulage for Macknade's EM Baldwin 0-6-0DH 14 (6/2490.1 7.68 of 1968), which required attention. Macknade Mill's Solari Engineering bogie brakewagon *BVAN 3* (built 1994), from EM Baldwin B-B DH 19 (7070.3 4.77 of 1977) was sent to Victoria Mill as it was required there for the recommissioning of *RYNNE*.

On 16 August, *RYNNE* did a trial run on Victoria Mill's Stone River line, paired with *BVAN 3*, and appeared to be in regular service by the following week, allowing the return of locomotives 20 and *LUCINDA* to their respective mills. This was followed by the return of *INGHAM* to Victoria Mill on 23 August.

Macknade Mill's Gairloch line, latterly named Lilypond, has been lifted this year, all the way from the catchpoints to the end. There were five sidings along this line and they have been replaced by one large siding in the region of where the first and second sidings used to be. The job was finally completed and the new siding used for the first time in early August.

On 3 August Hudswell Clarke 0-6-0 *HOMEBUSH* (1067 of 1914) hauled passengers for the annual Italian Festival.

Chris Hart 7/13, 8/13; Luke Horniblow 7/13; Steven Allan 8/13

Industrial Railway NEWS

WILMAR SUGAR (KALAMIA) PTY LTD, Kalamia Mill
WILMAR SUGAR (INVICTA) PTY LTD, Invicta Mill, Giru
(see LR 230 p.21 & 232 p.21)
610mm gauge
In around late July Kalamia Mill's, Walkers B-B DH *KILRIE* (632 of 1969 rebuilt Bundaberg Foundry 1992) was swapped for Invicta Mill's Westfalia B-B DH *STRATHALBYN* (13863.1 8.91 of 1991). It appears that this may have been because of troubles with *STRATHALBYN*'s torque converter. In late August, *STRATHALBYN* was operating on Kalamia's Rita Island line while *KILRIE* was operating Invicta Mill's Dalbeg run, utilising the bogie brakewagon normally paired with *STRATHALBYN*.
Invicta Mill's Clyde 0-6-0DH *KALAMIA* (67-569 of 1967) has been rebuilt with an Allison automatic transmission and re-entered traffic in late August.
Luke Horniblow 8/13

WESTERN AUSTRALIA

BHP BILLITON IRON ORE PTY LTD
(see LR 231 p.4)
1435mm gauge
BHP Billiton has reduced its Pilbara expansion budget by $343m, cutting back plans for a new blending and rail stockyard at Port Hedland. It was stated that the south stockyard at Nelson Point, Port Hedland was no longer included in the scope of the port blending and rail yard facilities project.
BHP Billiton train drivers have rejected a pay offer from the employer which failed to meet their demands of guaranteed annual pay rises of 4 to 5 percent, an extra 4 hours of annual leave for fly-in fly-out workers for each changeover, and cheap rental accommodation for locally based drivers in BHP Billiton owned housing to replace an existing $1800 weekly accommodation allowance.
The West Australian 18/7/13, 3/9/13

THE PILBARA INFRASTRUCTURE PTY LTD
(see LR 232 p.22)
1435mm gauge
On 15 August, Brockman Mining Ltd was successful in convincing the Western Australian independent Economic Regulation Authority to recommend that Fortescue Metals should negotiate with the junior miner over access to its rail network. Flinders Mines has also applied to the regulator over its bid to access to the FMG lines. FMG reacted negatively, stating that direct negotiations would lead to better outcomes. Brockman has signed a 3-year agreement by which Aurizon would provide rail haulage services to serve the company's Marillana and Ophthalmia mines.
On 16 August, FMG announced a $1.27 billion deal with Formosa Plastics Group to take a 31 percent stake in the FMG Iron Bridge project, a joint venture with Chinese steel maker Baosteel, including

Top: *Invicta Mill's Clyde 0-6-0DH* KALAMIA *(67-569 of 1957) has also been refurbished recently. Here it hauls a rake of fulls out of Cadio Road 1 siding on 26 August. Photo: Luke Horniblow* ***Centre:*** *The newly-constructed section of track at Atherton Road, Silkwood, which provides a link between the Tully and South Johnstone Mill systems. Photo: Luke Horniblow, 31 August.* ***Above:*** *Walkers B-B DH* ISIS No.4 *(656 of 1970 rebuilt Walkers 1994), painted in the new Isis Mill safety yellow livery, eases its load down Cordalba Hill on its way to the mill on 26 August. Photo: Hayden Quabba*

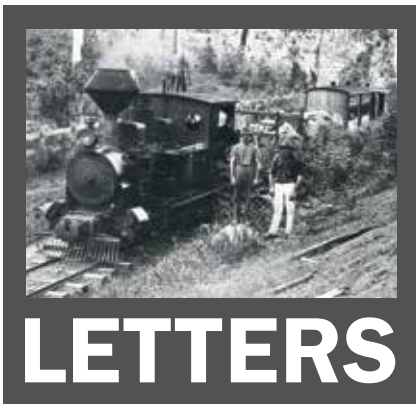
the use of the FMG port and rail facilities. Formosa will also build the first stage of the iron ore mine. An improved debt situation as well as this inflow of funds makes it less likely that FMG will go ahead with its planned sale of a share in The Pilbara Infrastructure.
Sydney Morning Herald 3/7/13, 17/8/13; *Logistics & Materials Handling* 29/7/13; *Business Spectator* 15/8/13, 16/8/13; *The West Australian* 16/8/13

PILBARA RAIL
(see LR 232 p.22)
1435mm gauge
Rio Tinto's plans for a 170 kilometre rail line to its proposed Koodaideri mine has been questioned by the Shire of Ashburton. The line is planned to pass near an asbestos-contaminated area at Wittenoom, the abandoned mining town. The Shire plans to lodge a submission to the Environmental Protection Authority, requesting that the proposed rail line be diverted around the area.
ABC News 27/8/13

OVERSEAS

FIJI SUGAR CORPORATION
(see LR 232 p.22)
610mm gauge
Following a serious accident inside the Lautoka Mill on 25 July, the mill was closed until 8 August and all cane was diverted to Rarawai Mill, including rail cane that was transported over the connecting line. Meanwhile a pay dispute with mill employees has led to a successful strike ballot and the threat of industrial action.
Fiji Broadcasting Corporation 26/7/13; *Fiji Times* 13/8/13; Fijivillage.com 21/8/13

Top: *South of Sarina, the Plane Creek southern cane railway parallels the electrified main line to Hay Point and Dalrymple Bay coal terminals. Here Walkers B-B DH 2* KARLOO *(630 of 1969 rebuilt Bundaberg Foundry 1995) and 1* ALLAN PAGE *(594 of 1968 rebuilt Bundaberg Foundry 1995) hurry their train of empty bins between Koumala 5 and Koumala 6 sidings on 3 August. Photo: Hayden Quabba* ***Centre:*** *Recently transferred to Invicta Mill from Kalamia, Walkers B-B DH* KILRIE *(632 of 1969 rebuilt Bundaberg Foundry 1992) heads its train across the Haughton River bridge on 26 August. Photo:Luke Horniblow* ***Above:*** *Millaquin Mill's Bundaberg Foundry B-B DH* ELLIOTT *(002 of 1991) climbs away from the Calavos Bridge towards 3 Chain Road with a load of 65 full bins from Loeskow's line on 25 August. A sign of the times with macadamia farms taking over from cane farming, as there used to be cane on both sides of the line at this location. The load of 65 bins is typical from Loeskow's farms as all the sidings on the line are were made for this size train. Photo: Lincoln Driver*



LETTERS

editor@lrrsa.org.au

Dear Sir,

Locomotives at Don River Railway (LR 231)

John Browning's photograph in the June issue of *Light Railways* (No. 231, p37) of the Dübs 6D9 2-4-2 tank locomotive, now displayed at the Don River Railway, solved another mystery from my time in Tasmania when a teenager in January 1948 (see LR No. 229, Feb 2013, p26-27 for the solution of a previous one).

One day during that month I was given a personal guided tour of Hobart station, yard and roundhouse by Bob Wallace, then Ambulance Officer for the Tasmanian Government Railways and father-in-law of one of my father's sisters. The family connection proved to be very useful.

Among the locomotives I saw and photographed that day were two rather sorry-looking old ones standing in a siding on the northern side of the mainline entering the station yard. One of these locomotives was the 2-4-2T referred to above; the other was the Fowler 0-6-0 tank locomotive mentioned in the text reporting John Browning's visit to the Don River Railway last April. My guide, Bob, had told me that the two locomotives had been/were to be used by the Hydro-Electric Commission but he did not know anything else about them.

After seeing John's photo of the Dübs locomotive, I checked my photographs of these two locos and found a note on the back of each of them referring to ARHS *Bulletin* No. 514, Aug 1980, p186, which gives a brief note of their history up to that time. This generally agrees with his notes in LR No. 231. It was particularly interesting to learn that the Dübs 2-4-2T had begun its service on the Queensland Railways isolated Bundaberg railway in the early 1880s and had been used on the Macquarie Harbour Works construction on Tasmania's west coast. Moreover, John's note that the Fowler had originally been at Kiama led me to consult a little booklet I had acquired several years ago. *Terralong Tracks Kiama* by Don Cottee and Yvonne McBurney (1987) records the fascinating story of two railways built along the main street of Kiama, NSW. The first one was a double track 3ft 6in (1067 mm) gauge line built in the middle 1880s by the municipal council to transport crushed stone from a quarry on the edge of the town to the town's harbour for shipment elsewhere for use as road base, railway ballast and road pavers. The Fowler 0-6-0T locomotive was purchased to operate this railway but, because of changing demand for the stone and deficiencies in the design of this railway, the Fowler only made one short test run at Kiama before being stored and later sold in 1889 or soon afterwards, when this railway was removed.

Photographs showing the original condition of these two locomotives have been published as follows: Dubs 2-4-2T in ARHS *Bulletin* No. 514, August 1980, p186 (actual photo is the sister engine to the Tasmanian one); Fowler 0-6-0T in *Terralong Tracks Kiama*, p42. A distinctive feature of the latter is the external Stephenson Link valve gear, which can be seen in both this photo and my one.

Finally, having visited the Don River Railway myself in November 1992, I checked my slides and found to my surprise that I had seen and photographed the Dübs loco a second time when it was awaiting restoration. A significant difference from my earlier photo is the addition of sloping metal plates on the footplate on either side of the smokebox. These can be seen also on John Browning's photo. What purpose do they serve and who fitted them, when?

Michael Gourlay
The Gap, Qld

Dear Sir

Caribbean Gardens Railway (LR 232 page 37)

The Malcolm Moore loco has been carrying the sign "Proudly on display from Caribbean Gardens" since 2003, when it went to the Alexandra Timber Tramway for their Malcolm Moore day on the 8th November. The day also included one of the Malcolm Moore locos from the Puffing Billy Railway Museum. All up, there were five of the 1943-built Malcolm Moore Ford V8 (also referred to as 1000 series) locos at Alexandra that weekend.

Peter Medlin
via email

Dear Sir

'Tom Thumb' at Botany (LR 158, 223 and 232)

Phil Rickard's letter in LR 232 provided some interesting and significant new information regarding the origins of the mysterious 'Tom Thumb'.

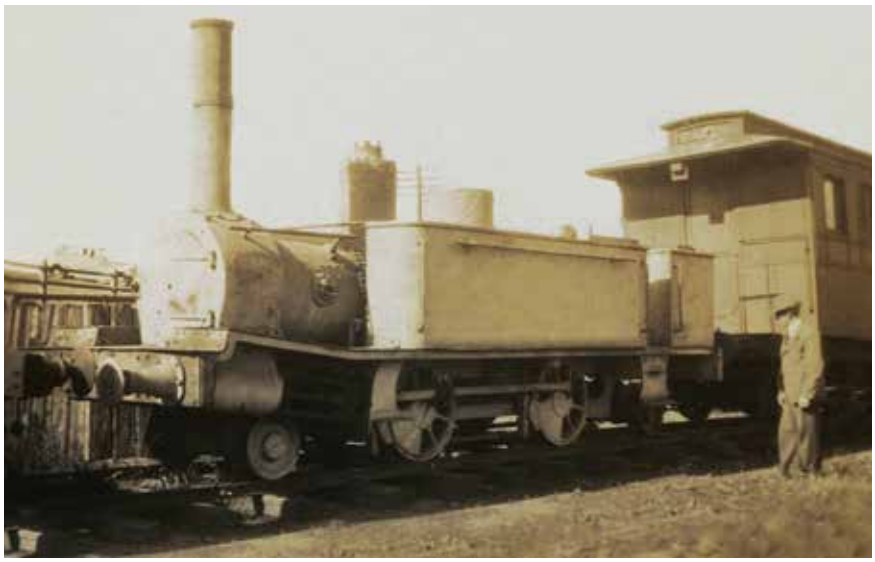
In concert with the newspaper report quoted in Jim Longworth's article in LR 158, the locomotive's builder was identified as Thomas Wearne. Phil's discovery that in the six months prior to Tom Thumb's appearance Wearne had been hiring workmen from the trades usually associated with locomotive building would also lend weight to the claim that Wearne was the builder.

To my mind, though, the most telling evidence is the presence at the launch event of Thomas Midelton and George Downe. If Wearne was now building locomotives and rolling stock, then these two gentlemen were surely his two most important potential clients. What would be the point of inviting them around just to watch a re-badged machine from another builder puffing up and down?

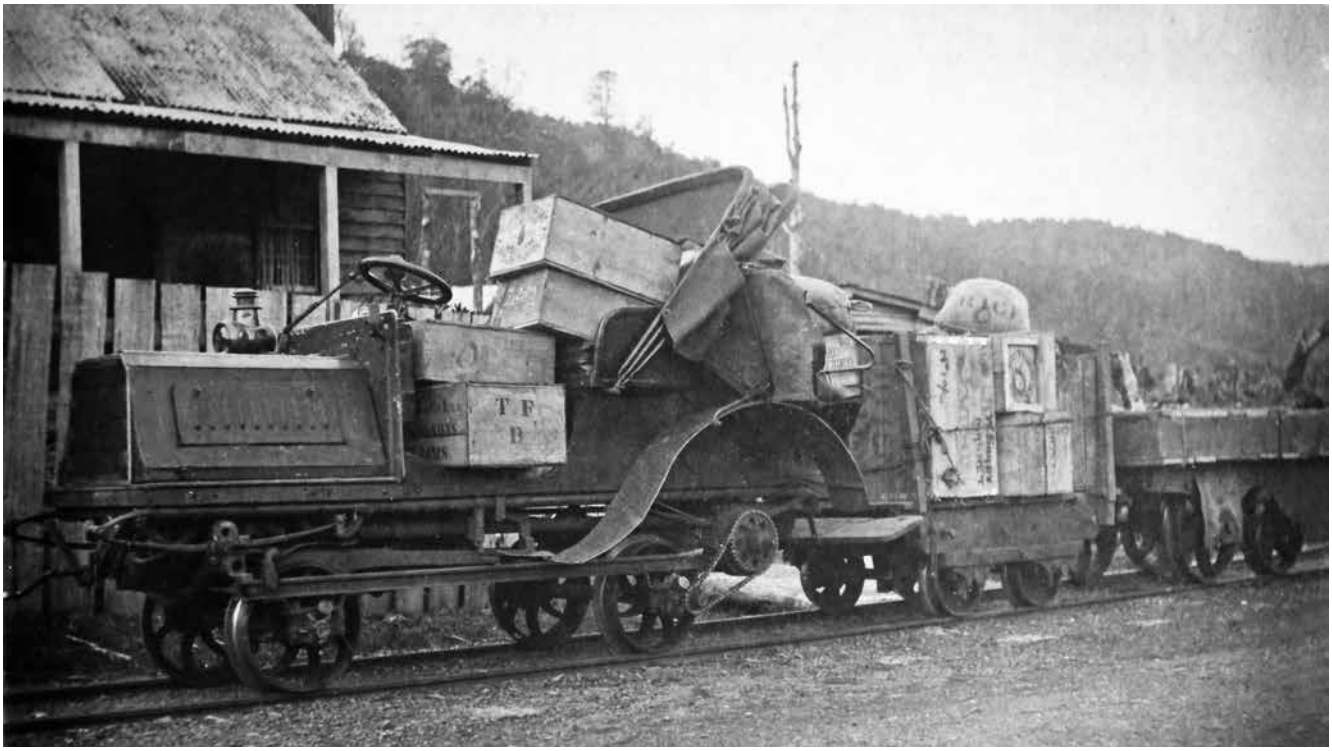
Of course, 130 years after the event, and with not a lot of evidence surviving, it is difficult to say with absolute certainty that Thomas Wearne built 'Tom Thumb' from the ground up. However, I do feel certain that, whatever the true story, this particular locomotive was not a product of John Fowler & Co.

As a former editor, I'm able to study the two surviving images at full-screen size. What I see (even without enlargement) is a locomotive possessing a wealth of features that do not conform to anything found on a Fowler locomotive of the period. The frames, the crosshead, the big and little-ends, the gauge-glass fittings, the running board, the safety valves, the plumbing arrangement – the list goes on and on. In fact, it's difficult to find very much at all that could owe its origins to Fowler.

The spring hangers on 'Tom Thumb' do resemble those on Fowler 4020 of 1880, but are, in any case, a very basic design. The trailing truck is similar to that on 4020, but then wheels with four holes were hardly rare, and are not necessarily indicative of



Dübs & Co. 2-4-2T (1415 of 1880) at Hobart station yard, January 1948. Bob Wallace, Ambulance officer, TGR, standing at right of locomotive. *Photo: M. Gourlay*



An interesting railcar at the Magnet mine settlement in Tasmania, circa 1925. *Photo: Mona Agnew, from John Haupt collection*

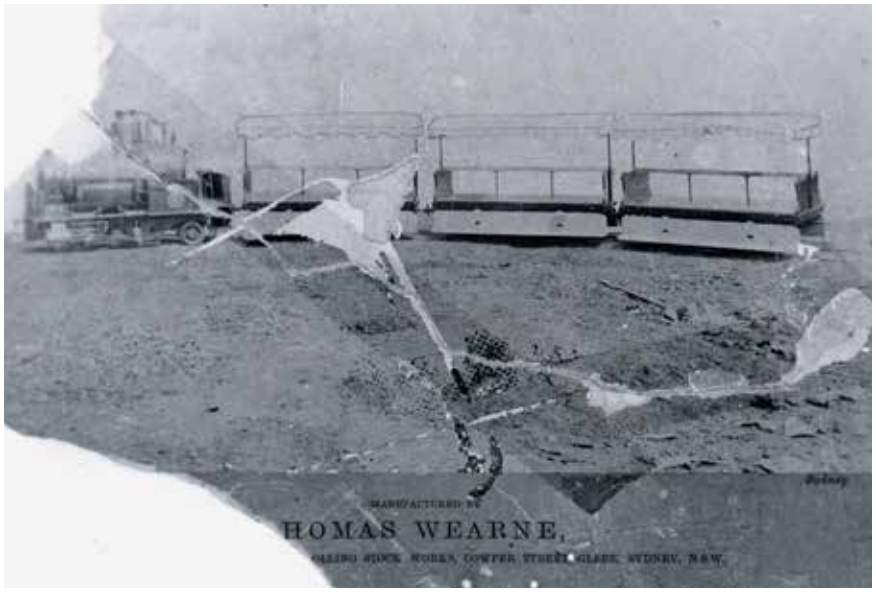
Fowler manufacture anyway – some surviving builder's photos from the period show a Fowler locomotive with six holes, and another with none.

The distinctive belly tank is certainly very similar to that fitted to Fowler 4020 – similar, but not identical. Not only is the filling cap different, but whereas the base of the tank on 4020 is a single piece of iron (or steel), riveted around the outer edges, on 'Tom Thumb' it has been bent around at the top and riveted on the inner edge.

We know from the newspaper report quoted in Jim's article that John Fowler & Co was involved in the building of the track at Botany, and quite possibly other aspects of the railway, so Thomas Wearne and his client, Mr Hassell, would certainly have had contact with the local Fowler agent. Perhaps Wearne was shown a photograph or drawing of 4020 by the agent, and was impressed by the idea of a belly tank.

Finally, I must apologise for the inaccurate caption I inadvertently provided for the photograph on page 30 of LR 232. A close examination of the second photo, showing the locomotive and its three carriages, clearly indicates that 'Tom Thumb' was actually much larger than the first photo indicates. Far from providing a sense of scale, the top-hatted gentleman is in fact creating an illusion of cuteness! I estimate that his image has been enlarged to around 150% of actual size – in reality, he would have been gazing at the front of the smokebox.

Bruce Belbin
St Ives, NSW



The second surviving photograph of 'Tom Thumb', though badly damaged, does provide some interesting insights, particularly to the actual size of the locomotive. Photo: CB Thomas collection, via Jim Longworth

Dear Sir

Magnet Tram (LR 231)

A note in the June Issue on a film of the Magnet Tram on YouTube reminded me of a photo I have of a railcar taken at the Magnet mine settlement in Tasmania.

I think that this was taken around 1925 and the photo is from the late Mona Agnew (married name). Her family lived at the Magnet in the 1920s and she attended school there.

John Haupt
via email

Dear Sir

The Shannon Mill railway (LR 231)

It was good to read Rod Milne's article on this WA timber tramway. However, on page 7, under the sub-title 'Locomotives', Rod mentions SSM No. 7 was the only locomotive observed on this line in its last years.

I was a passenger on the ARHS Victorian Division tour in September 1962. As well as SSM No. 7, a 2-6-0, used on the special train, in the engine shed at Shannon River Mill was SSM No. 9 with the tender from 'Wongon'. (A second locomotive would have been necessary to cover routine maintenance, boiler washouts, etc.)

According to *Rails through the Bush* by Adrian Gunzburg and Jeff Austin, SSM No. 9 was a 4-6-0, Dubs 3415 of 1896, entered WAGR service 21.1.1897 as G 135. To CR (NAR) Nga 77 30.4.1942 (later renumbered 81). To WA State Sawmills 1.1948. Withdrawn 1962.

The tender with the name 'Wongon' was originally attached to the locomotive later known as SSM No. 8 (a 4-6-0 by Beyer Peacock, 5662 of 1913) which on the ARHS tour was in use at Pemberton, with tender 134.

For more detailed histories of these locomotives, reference should be made to

Rails through the Bush, pages 117 to 121 and *A History of W.A.G.R. Steam Locomotives* by Adrian Gunzburg, pages 29-34.

ER (Ted) Godwin
Cockatoo, Vic

Dear Sir

Dining table tramway, Pearcedale Vic

While visiting a friend in Pearcedale in July 2013, I spied this unique 3ft gauge dining table tramway which is located in a semi outdoor entertainment area behind the house. Depending on the number of people they have for around for a meal, the table can be relocated to a convenient location along the approximately 15m long tramway. The rails are 50mm angle iron set in the paving as can be seen in the photo. The wheels were obtained from a nearby antique dealer many years ago, with no idea on what to use them. Eventually this piece of outdoor furniture was created and the wheels were pressed into service. The table frame is constructed from angle iron and the top is made from pieces of recycled red gum.

Bill Hanks
via email

The unique 3ft gauge dining table tramway at Pearcedale, Victoria. *Photo: Bill Hanks*

Dear Sir,

Forster breakwater works (LR 153 & 156)

I recently managed to establish that the second locomotive used at the Forster breakwater works at the turn of the twentieth century was in fact Andrew Barclay 211. It had long been believed that the only photo of the second locomotive at Forster showed that it was fitted with a ogee shaped saddletank. Taking a different tack, I asked myself what could be making it appear that the locomotive was fitted with an ogee shaped saddletank if in fact that wasn't the case. The answer became immediately evident when I viewed a photograph taken of the locomotive by Bruce MacDonald during its time on the Lobster Creek tramway in Tasmania. That photograph showed that the door of AB 211's smokebox had a large bulge, and it was immediately clear that it was that bulge that gave the illusion of an ogee shaped saddletank in the Forster photograph.

In addition to the above discovery, it had become clear to me that the vessel in the Forster breakwater photograph appeared rather strange, but more importantly, the crew members in the picture looked like characters out of *Toad of Toad Hall*, being both ridiculously short and solid – clearly the horizontal aspect of the photograph had been exaggerated. A horizontally shortened version of the breakwater photograph immediately produced an image that unmistakeably included the profile of AB 211.

The above discovery raises some very interesting questions about the first locomotive used at Forster and the purported vertical-boiler Mort's Dock locomotive used on Hudson Brothers' tramway at Naranie.

Ron Madden
Wagga Wagga, NSW

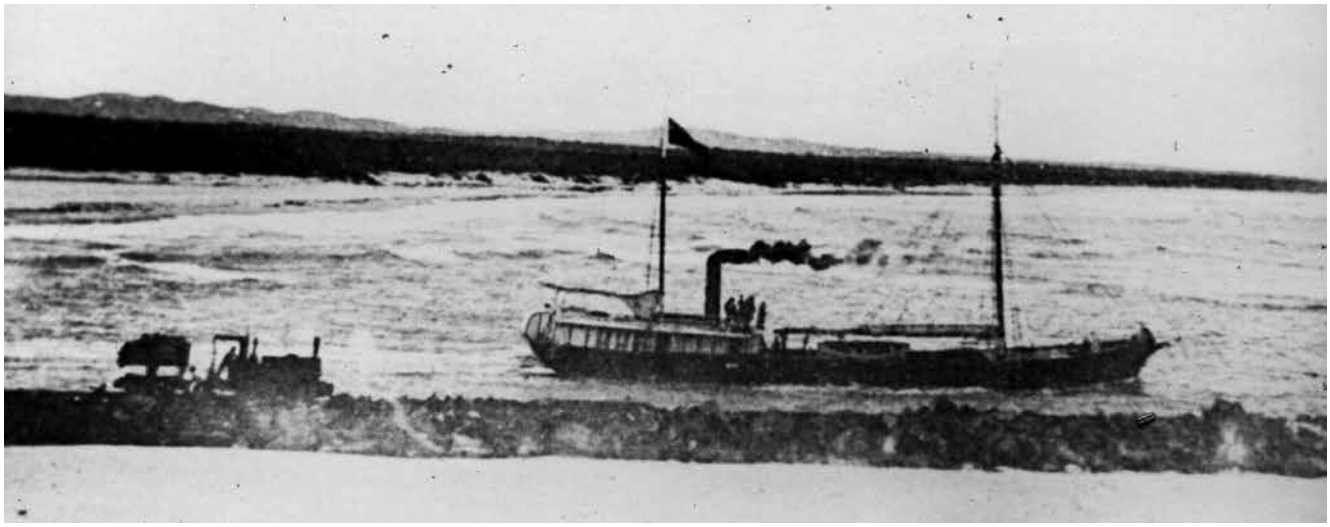
Dear Sir

Assistance with photos, State sawmill Erica (LR223)

The NQR wagons shown in the photograph were in use at the Erica sawmill. There were 10 NQRs transferred from Gembrook and Fern Tree Gully in September and October 1954. In 1972 they were transferred from Erica to Walhalla, for use in the attempt to revive the Walhalla railway driven by Ron Kain. After the demise of that operation they were purchased by Colin Rees, and moved to Seymour, where they joined three other NQR wagons, from the 'Whistle Stop' railway at Frankston. The wagons were transferred from Seymour to Emerald for use by Puffing Billy in 1997, where three have since been scrapped. One of these vehicles, 29 NQR, has been restored to "mainline" standards as per the VR drawings. A more detailed history is available in the PBPS *Narrow Gauge* magazine No 201 pages 10-11.

- Nos. 94, 102 & 169 were scrapped by PBR due to poor condition.
- No. 26 was stored at Belgrave South with 8 NU body on. 8 NU body is now mounted on 110 NQR.
- Nos. 53, 208, 100, 37 & 164, became underframes for 19-23 NBH / NBHC.
- No. 23, the ex Whistle Stop pass car, is stored/limited use along with Nos. 26, & 153.
- No. 29 is in service.
- Nos. 23, 29, 94, 100, 102, 110, 153, 164, 169 & 208 are unconfirmed as being at Seymour. Nos. 37 & 53 (ex Whistle Stop) are recorded as being at Port Melbourne.

Hugh Markwick
Additional information was supplied by Peter Medlin

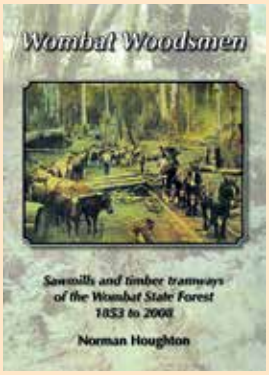


Hungerford & Sons' 0-4-0ST on the breakwater at Forster, NSW, as SS Commonwealth *steams by, circa 1901. Colin R Persson collection, via Richard Horne*

New from LRRSA Sales ...

Wombat Woodsmen

Sawmills and timber tramways of the Wombat State Forest 1853 to 2008



By Norman Houghton
Published 2013 by the author
Soft cover, 166 pages, A4 size
A thoroughly researched history of the timber industry in the area east of Ballarat, north of Ballan and west of Woodend, including Daylesford and Trentham.
40 maps and diagrams, 161 photographs, references, bibliography and index
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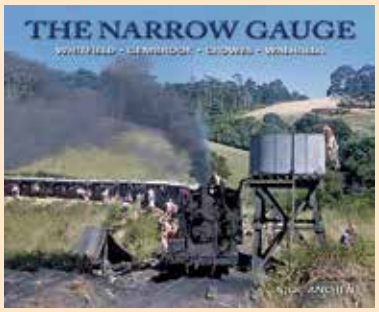
The Narrow Gauge

Whitfield – Gembrook – Crowes – Walhalla

By Nick Anchen
Published by Sierra Publishing
216 pages, 300mm 240mm landscape, hard cover, about 300 photographs



Includes details of locomotives and rolling stock, recollections of railwaymen and residents, and a guide to remains.
Price $75.00 plus postage
($67.50 to LRRSA members)
Weight 1,800 gm

Jinkers & Whims

A pictorial history of timber-getting in Western Australia

By Jack Bradshaw
Published 2012 by Vivid Publishing
110 pages 270 x 200 mm, hard cover, over 100 B&W photographs

Traces the development of the methods and machines used to harvest the forests of Western Australia over the last 150 years, from first settlement to the present day, from horse and steam power to modern mechanical harvesters.
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A history of the Lake George Mine at Captains Flat

By Ross Mainwaring
Published by the LRRSA.
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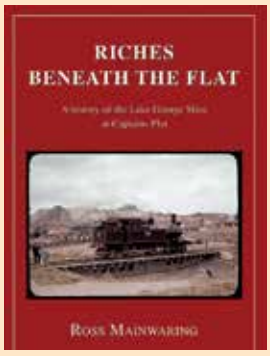

A history of the standard and narrow gauge railways, town, and silver-lead-zinc mine at Captains Flat.
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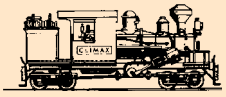

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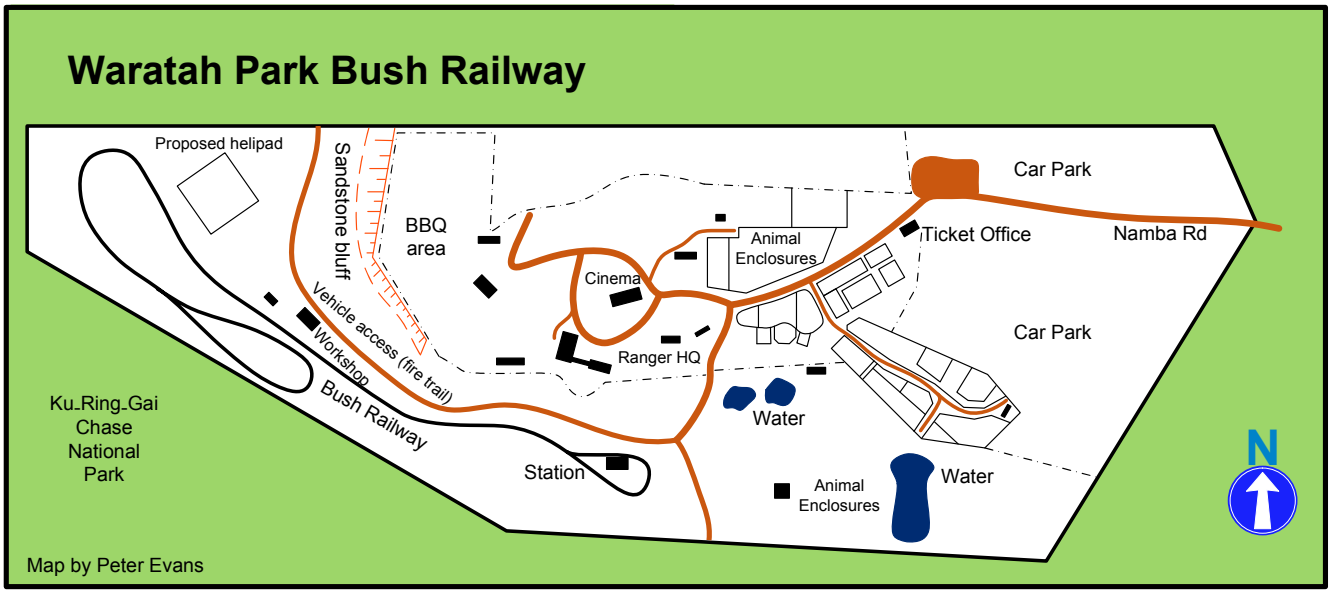
Field Reports

Please send any contributions, large or small, to fieldreports@lrrsa.org.au or to P.O. Box 21, Surrey Hills, Vic 3127.

Waratah Park Bush Railway
Duffys Forest, NSW.
610mm gauge (see also LR 175 and LR176)
I am involved with a group that is doing some bush regeneration work at Waratah Park (where the television series 'Skippy' was filmed). I have been doing some research into the park when it operated as a 'theme park' after the television series was completed.
The park featured a Bush Railway which ran for a number of years. In 2003 the railway was dismantled and the track, locomotives and rolling stock were sold to Peter Evans in Newcastle for the development of a private railway in the Hunter Valley. The locomotives and rolling stock included Motor Rail 'Simplex' 4wPM 11035 of 1965 (re-engined), John Dunlop B-B DM number 8 of circa 1977 (also re-engined), three passenger carriages, and some wagons.
There is not much left of the former amusement railway at Waratah Park, but you can see roughly where the track went along some sections along the line. All that really remains is the railway station and the loco workshop. There is a small section of track cemented into the floor of the workshop.
Brett Miller.

The derelict station and loco workshops of the Waratah Park Bush Railway.
Both photos, Brett Miller, 5 May 2013.



The remains of the Magnet Tram bridge over the Arthur River, north east of Magnet, Tasmania.
Both photos Mark Kendrick, 19 March 2013

Magnet tramway and mine
Waratah, Tasmania

610mm gauge (see also LR 231)

I spent a couple of days towards the middle of March 2013 exploring Magnet and drove whilst videoing the former track bed from Waratah to the mine, not really a viable track to drive unless you don't mind scratching your 4WD due to overgrowth. Waratah is located 7km off the Murchison highway, and was the site of the Mt Bischcoff tin mines. The site of the former meeting of the Magnet tram with the Emu Bay Railway branch from Guilford was located where Waratah airfield now is. For those interested in following the tramway, the access point is 2.2km southwest of the town on Waratah Rd. Turn right at the Waratah council rubbish tip, and the tramway formation can be followed from behind the skip bins. The track is dark and dank until it levels with the Arthur River. Historic photos show the hillsides bare of trees, but 70 years of regrowth has made it difficult to pick out locations where photos of the train were taken.

Despite the valley where the mine and town was situated being revegetated – predominately with Celery Top Pine, there are still some fantastic remains to be found. The enormous overburden/spoil banks still dominate the surroundings. At the mine site, the main adit, and the later lower level trial adit are still easily found, as are uprights from the concentrating shed, brick foundations from the crusher, concrete foundations from the hydro-electric powerhouse and auxiliary power plant. Further relics to be seen include rusty mine skips, a vertical boiler and lengths of rail 'up the gully'.

A small stamp mill was located below the town area, a pair of boots by the site of a workman's hut, while bottles and bricks mark the site of the shops. There is still most of a bridge over the Arthur River and most of the tramway earthworks are still more or less intact.

Mark Kendrick

Powelltown tramway, Victoria.

914mm gauge

The desire to produce a booklet for the Powelltown Centenary based around the pre-construction survey plans recently discovered by the Upper Yarra Valley Historical Society provided a great opportunity to use the information revealed by the plans. However, it also provided a problem. Details such as line curvature, cut and fill details, and bridge heights and lengths were available for most of the mainline to Powelltown and, in less detail, as far the original "dead-end", a short distance beyond Powelltown. What to do about the missing plans and the tramway beyond the dead-end?

We wanted to produce the most accurate map of the line possible so, at the least, we would include the missing sections of tramway survey as accurate plots but without the benefit of the additional information provided by the survey plans. Some thought then went into how the additional information could be collected. Contemporary aerial photographic imagery adjusted for inaccuracies provided the basis for the track alignment.

Inaccurate aerial photography; you might ask. Yes, aerial photographs tell lies! Almost always if the photo shows something it is definitely there. But not necessarily where the photo depicts it. Lens design and possible flaws as well as camera tilt and topographical displacement causes objects to appear on an aerial photograph in different places to where they would appear on a map. The further an item is away from the centre of a photograph the more likely it is that it will be affected. There is software available that will correct a lot of this but knowledge of the lens used for the photography is needed to use the software. For the Powelltown Centenary project another approach was taken.

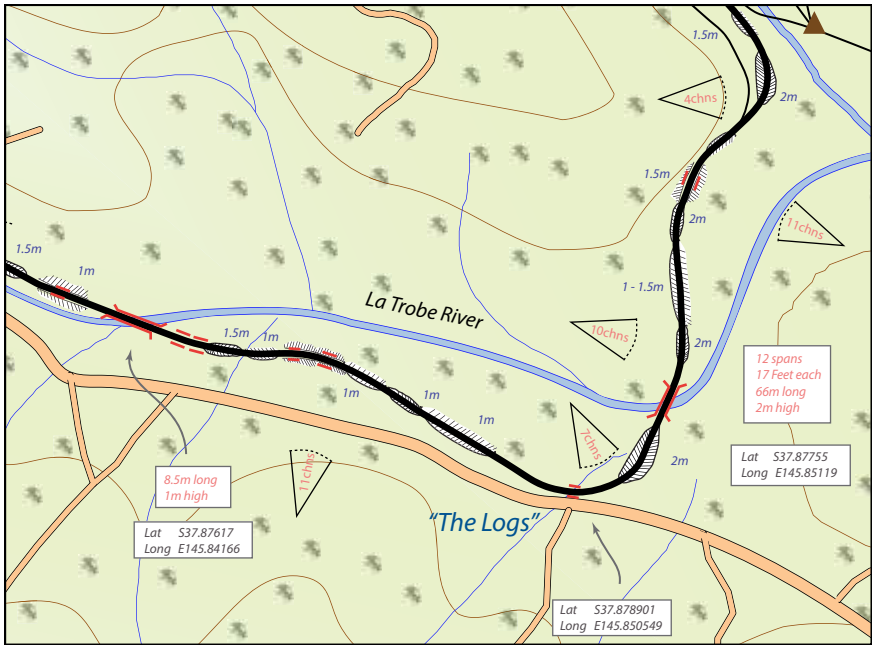
A digital map base which accurately depicted features such as contours, roads, creeks etc. was available for the area and this was used within Adobe Illustrator as the basis upon which aerial photos could be distorted so that all features lined up. To confirm the accuracy of the digital map base a drive was taken along the main road from Yarra Junction to "The Logs" with a GPS unit in track mode. No problems were found. After the Illustrator work we could be confident that the tramway alignment shown on the photographs reflected reality and could be relied upon for precise plotting. It was then a matter of tracing over the alignment (depicted clearly in the 1944 photography) to achieve a very accurate plot of the tramway.

Where curve radius information wasn't provided by the original survey plans these could be calculated off the scanned aerial photography under high enlargement placed within Illustrator using the three point method. Illustrator can provide x and y co-ordinates for each of three points on a curve. Several freely available facilities on the internet allow you to input these co-ordinates to provide you with the radius of the curve. The scale factor was then applied to get the radius of the curve in the tramway at that point.

That was the easy bit. Collecting detail of the cuts and fills, line elevations and bridge details meant getting out on the ground. This might not be the easy part but it was certainly a lot of fun! In total five hikes over sections of the tramway between Powelltown and Dowey Spur Road, on the north fall of the High Lead incline, were undertaken.

The walks were conducted with GPS units in background-tracking mode so that data was constantly being collected and recorded about where we were and our altitude at any point in time. This meant that we could concentrate on recording visual details as we went. Each participant was assigned a task. One carried the technology and recorded GPS waypoints of important features. These included start and finish points of cuts and fills as well as former bridge crossings. This person was also in charge of our range finder which was used to determine distances along cuttings, heights of embankments, depths of cuttings and bridge spans and heights. A second "red dot" rangefinder was used for horizontal distances less than 10m.

A second person became the note taker. He recorded the details provided by our range finder against waypoints marking locations. By this means maximum depths and heights of cuts and fills could be collected as well as distances through cuttings. His job was also to ensure expedition discipline! It would be easy to forget to take a waypoint or distance. Working with the technology operator little was overlooked. A third person functioned as photographer and walking laser target! Distances around curves in a cutting could be determined by irradiating the back of our walking target at progressive points around the curve. It may have been my imagination but I thought his hair was distinctly redder in colour at the end compared with the start! The rangefinder can work out to distances of 500m so accurately



A section of one of the completed maps as assembled by Mike McCarthy.

that determining stepped distances around a curve in a cutting was not a problem. The accumulated distances gave us our total length to verify against GPS waypoints for cutting starts and finishes.

The device was also used in a similar fashion to calculate the depth of The Bump tunnel at its maximum. Instead of measuring distances over a series of steps from the summit down to the tunnel entrance, progressive height changes were recorded. This was used to verify what our GPS units were telling us.

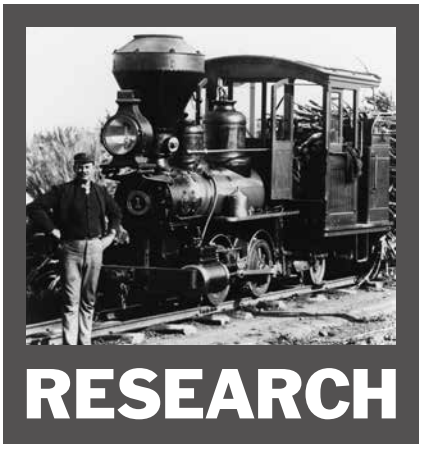
The fourth person functioned as our expedition artist (because any decent expedition should have one!) He sketched on a printed copy of the tramway alignment such details as tramway cross sections and any other features and relics worth recording with precision but not necessarily being noted as part of our technology based formal survey.

By this means we were able to collect all the data we needed to extend the detailed mapping out to a point a third of the way down the north slope of the incline leading to Ada No.2 Mill.

What about the sections out to the Ada mills and Starlings Gap, you might ask. It wasn't possible to cover this distance on foot; so much of this detail was collected through layering 1944 aerial photography with Google earth imagery in Adobe Illustrator. By relating the two it was possible to step along tramway formations within Google Earth at 50 metre intervals to collect altitude

The survey party in the bush. From left to right; Mike McCarthy (expedition technologist), Colin Harvey (expedition artist), and Peter Evans (expedition recorder). Photo by Brett Evans (expedition photographer), 26 July 2013.

information for the gradient profiles. Tramway curvature information could have been calculated for these outlying sections as well but we decided to restrict this level of detail to the main locomotive worked sections which ended at Powelltown Bush.
A word of warning about altitudes: They seem to be a moving feast! Mapping in the past has relied to a large degree on barometric devices to determine altitude and could vary from day to day. Precise accuracy was difficult to achieve. GPS units record altitude in a different way. It is calculated from satellite signals. The results can be different to those derived from traditional devices. Without getting into the technicalities, GPS based altitudes above sea level assume the earth is a perfect sphere. It's not! Therefore at sea level in Australia you can get very disturbing altitude readings from a GPS unit! However, a metre is a metre whichever measuring device you use so there is always a relationship between the two methods of discovering altitude. For the Powelltown project both barometric and GPS recordings of altitudes were used and had to be brought together for the final mapping.
The next step was the downloading of the data. The GPS tracking provided hundreds of measurement points for each hike. The altitude data from this had to be cleaned up for obvious inaccurate readings. Waypoints were downloaded to MapSource, a Garmin mapping product, and then a map displaying these was imported into the Adobe Illustrator master map for the tramway and scaled to match. This then placed all the waypoints in context with the tramway plot derived from the 1944 aerial photography and enabled the cut and fill, and bridge details to be incorporated into the mapping with accuracy. Reference was also made to the notes and sketches of our "artist" and early issues of Light Railways which included reports of field trips into this area that gave some detail of bridging etc. Combined it provided what has to be the most comprehensive and accurate record of this tramway that we have had to date.
The altitude information was used to extend the gradient profile over the full length of the tramway.
In all it has been a big exercise but also a very interesting and rewarding one as well. The use of technology, both in the form of software and measuring devices, has improved our scope to produce high quality mapping of tramway routes and remains. What was achieved for the Powelltown Centenary project would not have been possible 20 years ago without the use of very expensive equipment and specialists trained in its use. Today, still with some investment of course, you can achieve much of this yourself. A fascinating and enjoyable walk along an old tramway formation can also be a valuable precision information collecting exercise as well.
Many thanks to Peter Evans, Brett Evans and Colin Harvey for their assistance with the field trips and Phil Rickard for the quality testing of the plotting at the end. .
Mike McCarthy



Please send contributions to research@lrrsa.org.au or to P.O. Box 21, Williamstown, Vic 3016.

Assisting new researchers

At the LRRSA 50th anniversary conference held in May 2011, encouraging new research was seen as one way to both grow the organisation and the future submission of articles to *Light Railways*. Thus, we have been looking at ways to assist new researchers enter the field. The editors are keen to identify subjects for new researchers where little or no research has been done.
The editors are well placed to identify potential subjects, not previously published in *Light Railways*, but cannot guarantee subjects are not being actively researched or published elsewhere. We can assist in identifying potential sources of material for the subject.
Subjects will be sourced from material identified by the editors or from correspondence with active researchers. Individuals who provide information that the editors may note as useful for future research will be given the first opportunity to research that subject. If more than one person is interested in the subject, we will seek to assist in planning how collaboration may benefit the research.
Once a new researcher takes on a project, we will endeavour to direct any queries they may have, but strongly recommend the LRRSA Yahoo group as a source of knowledge. There is an extensive collective knowledge on the site, which has in the past shown a great willingness to share and assist their fellow researcher.
Interestingly, while doing a search of existing literature for this month's research project, I came across a similar article encouraging research, offering the assistance of the then editor, Frank Stamford, and Geoff Maynard. The date was 1967, it was published in LR 21.

Research subject – Lauriston Reservoir

A postcard image of the Lauriston Reservoir in Central Victoria was published in LR232, sparking a number of curious researchers to look through online photographic archives which held a considerable number of images. These images reveal an extensive switchback tramway system zigzagging its way down both sides of the valley, plus a spur line to aid in the construction of an earthen wing wall. A Malcolm Moore 4wPM locomotive can be seen in a number of the photos and an aerial ropeway was installed to deliver material direct to the dam wall. The reservoir was constructed by the State Rivers and Water Supply Commission of Victoria (SR&WSC).
Information researched and collated by Peter Medlin revealed that the SR&WSC used at least three Malcolm Moore locomotives on different construction projects in Victoria during the 1930's and 1940's. It is likely that at least one of these locomotives was used at Lauriston. A review by the editor has found an impressive collection of related images held by the State Library of Victoria, the Public Record Office Victoria and Coliban Water.
Lauriston Reservoir has not appeared in any previous *Light Railways* publications. Some articles and letters on the SR&WSC have been published over the years, most notably Peter Charrett's article in LR23 on the rail operations at the Hume Reservoir construction project. There are also some publications on Lauriston Reservoir published by the SR&WSC and the Rural Water Commission of Victoria.
This subject would be a great opportunity for further investigation by a new researcher; there appears to be a significant amount of material, plus many magnificent images that the editors would love to be able to use in *Light Railways*. For more information, contact the Research Editor.

Eresources

Many *Light Railways* researchers would be familiar with Trove[1], but there are many more electronic resources (eresources) available for members of their State Library. Joining your State Library (or the National Library of Australia) is free and can be easily done online. The eresources, give access to online journals, newspapers, magazines and websites, company information and Australian standards, legislation, music scores and recordings and encyclopedias[2]. All of these eresources can be accessed from home.
While the layout and content of eresources vary state by state, they all offer access to significant amounts of information, including many research databases, which normally charge for access. Of particular use to *Light Railways* researchers may be business databases (e.g. Company 360), history databases, both Australian and international (e.g. Australian Heritage bibliography), biographical indexes, nonfiction ebook collections, historical journals (e.g. Victorian Historical Journal) and magazines.
In coming issues we will be providing more information on some of these eresources, but face-to-face and online tutorials are also available through the libraries' webpages.
1. http://trove.nla.gov.au/ Accessed 26 August 2013
2. http://www.slq.qld.gov.au/search/eresources Accessed 23 August 2013

The Ketch Cicada *at Geelong's Customs jetty, captioned by the photographer as "Laden with steel rails for the cement Co."* *Photo: Alan Maggs Collection*

The ketch *Cicada* and Sorrento Tramway rail disposal

While scanning a collection of glass plate negatives recently, Alan Maggs found one of the auxiliary ketch *Cicada* captioned '*Lying at Customs Jetty laden with steel rails for the Cement Co. from Sorrento Wednesday 23rd Feb 1921*'. While it is believed that sleepers from the Sorrento tramway went to Fyansford, this now raises questions about the distribution of the rails once the tramway closed.

The two Baldwin locomotives 9086 of 1888 and 12007 of 1891 and rails were purchased by the Loch Valley Timber Co., Mike McCarthy's search of Forests Commission Victoria records show that the ex-Sorrento rails were 60lb/yd and were deemed to be beyond what was needed on the Loch Valley line at Noojee. The Loch Valley Timber Co and the Goodwood Timber and Tramway Co, also at Noojee, arranged an exchange of the 60lb/yd rails, with Goodwood receiving the heavy rails in return for 20lb/yd rails ex Mullungdung, near Yarram, but no quantities are mentioned.[1]

A search of Trove produced some interesting results:

WANTED, 30 tons of Secondhand Tram Rails, about 40lb to the yard; also Points and Crossing, 3ft 6in gauge. W.B. McCann, Manager, Cement Company, Geelong.

The Argus, Thursday 7 October 1920

RAILS FOR SALE, 50lb and 60lb, about 2¼ miles track, including points and crossings; also Baldwin Locomotive, 3ft. 6in. gauge, good condition; immediate delivery.

Particulars from M. MULLINS, 39 Station street. Malvern.

The Argus Saturday 16 October 1920

ENGINE-DRIVER, Baldwin locomotive, country; permanent position capable man. By letter, references, L.V.T. Coy., 39 Station st, Malvern.

The Argus Saturday 14 January 1922

So where does this leave us? We know that both Baldwins ended up at Noojee,[2] despite one of them being advertised for sale with a quantity of rail almost identical to that which was available from Sorrento, which would weigh approximately 220 tons. We know that the Australian Portland Cement Company in Geelong was after only a small amount of rail, well within the amount available from just across the Bay which was advertised for sale nine days later. The photographer recorded *Cicada* with a load of steel rails from Sorrento tied up at the Customs Pier at Geelong, one of several piers that did not have a rail connection to the Victorian Railways network. The *Cicada* had a capacity of 71 tons, so 30 tons of rail were well within its capacity. From the evidence presented it would seem reasonable to assume that some of the rails went to Fyansford, but this has not been confirmed, can any readers provide more information?

A.Maggs, C.Harvey, M.McCarthy, P.Rickard, N.Houghton, S.Gould

1. FCV File : 22/0384
2. JL Buckland, 'The Saga of 'Sandfly' and the lost tribe', *Light Railways* No 65 Light Railway Research Society July 1979 p. 20,27

ERRATA

The caption for the photograph on page 21 of LR 232, August 2013, of Mackay Sugar's *SHANNON* should refer to four wheeled ballast hoppers, not fur wheeled hoppers.

The photograph on page 25 was taken by Chris Wurr.

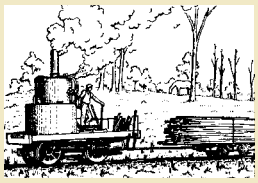
The Caribbean Gardens report on page 37 was written by Steven (not Stephen) Haby.

We apologize to the authors for these errors and omissions.

OBITUARY

Long time LRRSA member Eric Sibley passed away recently while on holiday in South Australia.

Eric was one of the co-authors of the Lal Lal iron tramway article in LR34, and was research assistant to Keith Bowden for his book on Victoria's Great Southern Railway.



LRRSA NEWS

MEETINGS

ADELAIDE: "Smithfield explosives compound railways."

John Meredith's video of our visit, with copies available of Arnold's article from LR148, a large scale map presented by Peter Barry, and any other photos of that day which members bring. Bring along items of light rail interest, including news of industrial, heritage or tourist light rail in SA.

Location: 150 First Avenue, Royston Park.

Date: Thursday 7 November at 8.00pm

BRISBANE: "Cane lines and ANGRMS rail recovery."

Greg Stephenson has offered to show photos and speak on his August 2013 trip to North Qld and rail, sleeper & track bolt recovery for the ANGRMS Woodford Museum Project.

Location: BCC Library, Garden City Shopping Centre, Mount Gravatt. After hours entrance (rear of library) opposite Mega Theatre complex, next to Toys'R'Us.

Date: Friday 18 October at 7:30pm

MELBOURNE: "The Lumber Barons of Algonquin Park, Ontario, Canada"

Peter Evans will be presenting a slide show followed by a DVD of logging in Algonquin Park in Ontario, Canada. Logging methods were vastly different from those in Australia, but both countries relied heavily on railways for transport. Locomotives used in Algonquin Park included conventional side-rod types as well as Shays.

Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.

Date: Thursday 10 October at 8:00pm

SYDNEY: "Tramways and inclines of the Blue Mountains"

Jeff Moonie will share with you the results of his research into some of the varied railways, tramways and inclines that were once to be found above and below the Blue Mountains between the Nepean River and Lithgow.

Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).

Date: Wednesday 23 October at 7.30pm

Heritage & Tourist NEWS

News items should be sent to heritagetourist@lrrsa.org.au Digital photographs for possible inclusion should be sent direct to Scott Gould at editor@lrrsa.org.au including the name of the location, the name of the photographer and the date of the photograph.

QUEENSLAND

FRIENDS OF ARCHER PARK STATION AND STEAM TRAM MUSEUM, Rockhampton

610mm and 1067mm gauge

Two projects have been proposed for Friends' support. The restoration/refurbishment of all the mannequins which by now are showing some wear and tear but are still an attraction for visitors and the introduction of audio visual facilities for some of the displays such as the electric staff and Morse code instruments etc. Fortunately a representative from the firm who had previously worked on the mannequins has visited – so research has already started.

The Family Fun Day on 30 June was described as the best ever with over 630 visitors. Highlights of the day included the "Storm Troopers" in their Star Wars outfits; a session with the Rockhampton Pipe Band, and a large roll up of vintage and classic cars. With such a big roll up of patrons and their cars, thanks go to the Military Museum for opening their grounds for overflow parking. They also had school activity days on 24 June and 1 July which were satisfactorily supported. The restored Tamper section car was finally commissioned and operated giving rides for the first time on the Family Fun Day. With the cooler and dryer weather, the track maintenance works are making some real progress.

Tram Tracks 8/13

DURUNDUR RAILWAY, Woodford

610mm gauge

As reported previously, Moreton Bay Regional Council has purchased the block of land out the back of the Woodford Station site. This site is to be used by several community groups, as well as the railway. While the railway does not immediately require any extra area, they need to plan for the future when the railway grows and eventually reaches D'Aguilar. The Council will be funding a Master Plan for this site, and discussions have already commenced regarding future requirements. Being a railway, in addition to space required for sheds, there is also have the issue of space required for access tracks, plus suitable grades, etc. Therefore, the railway's requirements will have a significant impact on the planning process.

The railway has obtained a supply of concrete and steel sleepers which will allow them to gradually reduce future maintenance requirements. 15 July was set as the commencement date for the concrete sleeper sorting in North Queensland, with work continuing through to the following Sunday

As part of long term rolling stock maintenance planning, a member has been working on developing a procedure for more regularly checking wheels and recording the amount of annual wear. This will allow the railway to determine the wear rate on wheels which in turn will allow them to plan future maintenance/replacement requirements.

Public running days continue on the first and third Sundays of each month. Unfortunately the railway is suffering as a result of the tough economic times, plus some wet weather, with passenger numbers for May and June down about 40% compared to the same period in 2012 (excluding special runs).

Durundur Railway Bulletin, 7,8/13

BUDERIM TRAMWAY, Buderim

762mm gauge

The Buderim Palmwoods Heritage Tramway Inc launched its campaign in June to raise $300,000 for a display building. Community members enjoyed drinks and snacks at the War Memorial Hall while viewing a slide show of the restoration work on the 0-6-2T Krauss steam

On 21 July 2013, public operations recommenced at the Australian Sugar Cane Railway, six months after the devastating Bundaberg flood. Driver Ross Driver and Fireman Alan Edwards have INVICTA *putting on a good show for visitors.* *Photo: Wendy Driver*

locomotive which operated on the tramway serving local farms and sawmills. The line was built by the Maroochy Shire Council to link the farming community of Buderim to the QR mainline at Palmwoods, north of Brisbane. Krauss (6854 of 1914) operated on the 2ft 6in gauge line between 1914 and 1935, after which it was converted to 2ft gauge and worked at Bingera Mill until the 1960s. It passed through a number of private hands before being acquired by BPHTI in 2004. A number of active volunteers have since restored the locomotive to immaculate condition for display. Several sites along the route of the tramway have been cleared as a walking trail with historic signage detailing the history of the line. A small Shay also worked on the line and its boiler was dumped as fill in the Palmwoods railway yard. The bell from the Shay is used by the local St Marks Anglican Church at Buderim.

Councillor Dickson started the fund with a donation of $10,000 towards construction of a display building for the restored locomotive to be built at the corner of Lindsay Road and Burnett Street, near the original terminus of the line.

Ian Crellin 7/13

DAVID EGLINGTON, Toowoomba

610mm gauge

A pair of Jenbach 4wDM JW15 locomotives, 1077 and 1079 both of 1951,were offered for sale on eBay in August. 1077 may have been the first diesel locomotive supplied to the Queensland coal industry. It was supplied by Queensland Industrial Sales & Service Ltd. to Westvale No.5 Colliery at Lanefield, Qld in 1952, and is thought to have featured in a newspaper report on 28 February of that year.

The *Courier-Mail* reported back then:

> *Installation of diesel coal haulers would mean an increase in coal output per man in Queensland, a State Coal Board representative said yesterday.*
>
> *With mine owners and managers from all over the West Moreton coal field yesterday he saw a demonstration of the first diesel loco used in a Queensland mine. They saw the loco hauling coal in the West Vale colliery, near Rosewood. The loco, known as the Jenbach 15, is built in Austria and has a 15 h.p. motor capable of hauling up to 14 loaded coal-trucks at a speed of 5 mp/h 'This is about twice as many as pit ponies can pull.' an Industrial Sales and Service representative (Mr, E. A. McKinnon) said. The loco has a special attachment to its exhaust known as a 'scrubber.' which extracts harmful gases from the exhaust. Cost of the loco is £1500.*

eBay, Stephen Larcombe (Via Yahoo group), John Browning The original article can be found at: http://trove.nla.gov.au/ndp/del/article/50316861

AUSTRALIAN SUGAR CANE RAILWAY, Bundaberg

610mm gauge

Ross Driver reports that the Bundaberg railway commenced running after six months without trains. John Fowler 0-6-2T *INVICTA* is currently operating the services..

The local newspaper reported: *Six months and more than 3000 volunteer hours on from the 2013 floods, the Australian Sugar Cane Railway is ready to get back on track. The railway's planning engineer Ross Driver said he and the railway society were extremely excited to be reopening for business on Sunday.*

"We are over the moon," he said. "There were times there where we didn't think we'd get back and asked ourselves what we were doing."

Mr Driver said the community had spurred on the team. "Especially when people kept asking when we were opening and that they really missed us," he said. "That gives you the kick up the bum to keep going." Mr Driver said the damage to the railway totalled more than $175,000. "We had to get the mud and sand out of the facility and fix the broken track.

Ross Driver, Jim Alouat *NewsMail* 7/13

DREAMWORLD THEME PARK, Coomera

610mm gauge

Both Steve Malone and Mark Gough have recently made separate visits to the Dreamworld theme park on Queensland's Gold Coast.

On Saturday 10 August Mark revisited Dreamworld on the Gold Coast after a period of 12 years, to have a family day and to see the changes in the operation of the railway since he last worked there, while Steve and his family visited on the following Wednesday, Queensland's Royal National Agricultural Show Day public holiday. 4-6-0 Baldwin 45215 of 1917 was in operation with its regular consist of three covered carriages and guards van with access for wheelchairs and prams. The Saturday schedule saw the first train depart at 10:30am and operate every 30 minutes from Central Park station, with a break in operations between 12:30pm and 2pm, during which the train was returned to the stabling shed. On resumption of services after lunch the trips were fully loaded with between 150 to 160 passengers per trip, until the last train departed at 4pm from Central Park station.

Mark Gough, Steve Malone 8/13

Long time Dreamworld favourite, Baldwin 45215 of 1917 hauls a train of customers past the Motocoaster on 14 August 2013. *Photo: Steve Malone*

This newly arrived steam outline, diesel powered locomotive was photographed at Dreamworld's Central Park station while undergoing trials on 28 August 2013. *Photo: Albert River*

A new steam outline locomotive was photographed undergoing tests at Dreamworld on Wednesday 28 August during public hours. The locomotive is rumored to be a replacement for both the steam locomotives. It is expected steam services will continue for the next few weeks, including the Queensland school holidays in September.
Albert River 9/13

NEW SOUTH WALES

FRIENDS OF THE WOLGAN VALLEY WILDERNESS RAIL TRAIL, Lithgow

At the recent AGM of the Friends of the Lithgow District Ltd it was decided not to wind up this organisation established by the late John Buckley, but to channel the enthusiasm and commitment of its members in a new direction.
There was unanimous support for the change of name of the company to the Friends of the Wolgan Valley Wilderness Rail Trail whose aim will be to develop a walking and cycling track along the original right of way of the old Wolgan Valley railway.
The original railway, ran from Newnes Junction on the Main Western line to the Wolgan Valley, a distance of 51km. It was used at the turn of the last century to transport shale, refined oil, coke and bricks from the Commonwealth Oil Corporations works at Newnes to markets far and wide.
Working in conjunction with the Wolgan Valley Wilderness Railway Rail Trail group and sponsored by COC Limited, the Friends group will play a major role in assisting with the development of the Wolgan Valley Rail Trail. The Rail Trail concept is relatively new to New South Wales but other states such as Victoria and Tasmania have been developing these trails very successfully for many years and have become very big tourist attractions and money spinners for the communities they run through.
Apart from developing a world class tourist attraction through some of our most spectacular country into the Wolgan Valley, there are other drivers for developing this rail trail. The collective aim of all the groups involved in this project will be to ensure that the history of the railway line and of the oil shale works it serviced will be preserved and protected for future generations to enjoy.
Deputy Chairman of the Friends group Michael Wilson said; "*unfortunately over the years this important part of our industrial heritage has been largely forgotten with very little money spent on the sites, nor have those areas been recognised as having far greater tourist potential than they are given credit for. Even now the glow worm tunnel and the works site at Newnes are very popular with tourists, day trippers and campers.*
However if the sites were linked via an accessible rail trail to establish an integrated development it would soon triple the visitation to the area and would pave the way for other entreupreniral opportunities to support the visitors, not to mention bringing people into Lithgow."
If the Rail Trail concept is achieved it will provide a family friendly attraction for people of all ages and diverse interests to enjoy and will subsequently enhance eco and heritage based tourism in the district.
It is hoped that this new direction will better achieve some of the objectives of the original Friends Company and will ensure that John Buckley's vision to showcase Lithgow's heritage lives on.
Details on getting involved with this exciting new project or becoming members of the Friends group can be made by emailing us at enquiries@coclimited.com.au
Michael Wilson 7/13

DORRIGO STEAM RAILWAY AND MUSEUM, Dorrigo

1437mm gauge
Maitland will say goodbye to seven of its historic steam engines to a private collector in Dorrigo with the deal meeting final approval from the Heritage Council of NSW. A leaked letter from the Heritage Council, addressed to the new owner Keith Jones, reveals consent to load the Class 10 engines on trucks for transport up the coast to the proposed rail museum. The letter ends speculation that the deal – for an undisclosed sum – could fall through and leave Maitland man Chris Richards without a buyer. The transfer will take place in stages starting with two dismantled engines.
The Heritage Council will require a complete inventory of all items related to the Class 10 locomotives before they are transported. Under the NSW Heritage Act 1977, failure to comply with the conditions of the approval could leave Mr Jones facing a fine of $1.1 million, six months imprisonment, or both.
Two of the engines, which lie dismantled, will undergo conservation treatment as soon as they arrive, in line with Mr Jones' plans for a future museum and his application to the Heritage Council. The Heritage Council has stipulated that Mr Jones use vegetable oil to coat and preserve all parts exposed to the weather. Photographic evidence and written confirmation of the conservation measures are required within three months of their arrival at Dorrigo. The Heritage Council will require Mr Jones to build a shelter for the first two engines within two years. Mr. Jones will also have to build shelters for the remaining five engines before they are moved.
"*To ensure these the conditions of the determination are complied with, the Heritage Division will maintain contact with the owner of the locomotives to monitor the conservation of the items and the progress of the shelter construction*," a NSW Office of Environment and Heritage spokeswoman said.
The Class 10 engines were used to haul coal out of the Cessnock and Kurri Kurri coal fields to port at Newcastle for much of the 20th century.
Sam Norris, taken from the *Maitland Mercury* 7/13

VICTORIA

PUFFING BILLY RAILWAY, Belgrave

762mm gauge

Re launch of Climax 1694

On Sunday 8 September a special train operated from Belgrave to Emerald to celebrate the relaunch of former Forests Commission Victoria Climax 1694 of 1928, on the 85th anniversary of it entering service.
One of only four operating Climax locomotives in the world, the trip was the culmination of a $700,000, ten year long rebuild, the second of its life as a preserved engine. The previous restoration saw the loco return to service in 1988 for a period of 13 years until it made its last run on 7 April 2001.
An on time 9:30 departure from Belgrave saw the train greeted by many photographers at the trestle bridge, while a photo stop was held at the site of the landslide to enable those travelling to obtain some off train photos. After an easy climb of Emerald bank with seven NQR open wagons and NC van in tow we arrived at Emerald where morning tea was served, while 1694 was posed for photographs on the turntable, and with the former Taiwanese Alishan Shay.
The train returned to Menzies Creek where the opportunity was given to inspect the ongoing progress in the museum area, where a fundraising stall was selling merchandise including an updated edition of '*A locomotive Resurrected*'. While enjoying lunch, speeches commemorating the occasion were given, before the final run to Belgrave saw the train arrive at two minutes past four, 12 minutes early.
Congratulations to all involved with the fundraising and restoration project.
Scott Gould 9/13

As well as the Climax, NA locomotive 12A was also out shopped in late August for a test run with a full load after a 6 year overhaul, sporting its new Canadian Red Livery.
A contract has been let for the construction and supply of a new boiler for the South African Garratt locomotive NGG16 129. It is anticipated that this contract will be completed by mid-2014. The board has also approved the construction and purchase of one set of pressed plates suitable for use in the future fabrication of an NGG boiler.
During the election campaign the railway was pledged $3.125 million by Prime Minister Kevin Rudd toward a Discovery Centre at Emerald Lake, if the Labor party was re-elected.
The investment would be allocated to the construction of a Discovery Centre to offer visitors information about the history and construction of the Railway and its place in the broader history of the Dandenong Ranges. It would also include a learning centre catering to the needs of school groups, along with cafe and kiosk facilities.
Puffing Billy CEO John Robinson said: "*This investment initiative focuses on ensuring long term sustainability for the Puffing Billy Railway and substantially improving the visitor*

experience for Puffing Billy patrons. It will also provide an all weather destination experience which will promote the growth of all year round patronage. The investment will support existing jobs and create new jobs both during the construction and operational phases."
It was unclear at the time of going to press whether the Liberal party would match the funding pledge.
Matthew Cantle, Monthly News, Sue Ham, 8 and 9/13

NOOJEE & DISTRICT HISTORICAL SOCIETY
1600mm and 1067mm gauge
The Noojee and District Historical Society is establishing a heritage project centre on the former Victorian Railways station site. When completed the site will feature a replica of the railway station building, a sawmill and a display of railway and tramway equipment. The society has recently relocated ex VR J 550 (Vulcan Foundry 6146 of 1953) from Warragul, and also have on site a very interesting 1067mm (3ft 6in) gauge log bogie. The bogie features springing not normally used on timber tramways, wheels which are from the Angleur, Belgium and axles which are stamped QR.
Mike McCarthy believes the bogie may have come from Gunn's period of operation of the Loch Valley Tramway, after the 1926 bushfires. Gunn was known to have purchased log bogies from a Queensland sawmiller.
Noojee & District Historical Society web page, Mike McCarthy 8/13

TASMANIA

WEE GEORGIE WOOD, Tullah
610mm gauge
Robert Wilson has reported that 'an acquaintance' has advised that the new boiler for "Wee Georgie Wood" is complete and has passed all of its tests. It should arrive next week to be reunited with the rest of the locomotive and enable it to be back in operation in the not too distant future.
Robert Wilson 7/13

WEST COAST WILDERNESS RAILWAY, Queenstown
1067mm gauge
West Coast tourism boss Phil Vickers will lead the charge to have the Abt Railway operational by summer.
Mr Vickers was named general manager of the Abt Railway Ministerial Corporation by Infrastructure Minister David O'Byrne in late July. A local newspaper report said he was a well-known local councillor, involved in West Coast Heritage, chairman of West Coast Tourism, vice-chairman of the Zeehan Primary School Council and honorary auditor of nine West Coast clubs and associations. Mr Vickers will oversee the railway operations

Not instantly recognisable as timber tramway equipment, this 1067mm gauge log bogie forms part of the Noojee & District Historical Societies display at the former VR Noojee railway station site. Photo: Mike McCarthy

Wee Georgie Wood *(Fowler 16203 of 1924) at Farrell siding, 23 Apr 1948. The Farrell tramway provided a link for the Tullah township with the outside world via the Emu Bay Railway for another 14 years, until the tramway closed in 1962. Photo: Alan Wilson, Robert Wilson collection*

World War I veteran and Lynton & Barnstaple railway stalwart AXE *(Joffre Class Kerr Stewart 2451 of 1915) is seen fresh from overhaul on its first day back in service, 10 June 2013. Photo: Peter A Jones*

Prior to the Federal Hotels Group forfeit of the West Coast Wilderness Railway lease at the end of April, ballast hoppers were transferred from the storage siding at Lynchford to Carswell Park, Queenstown for overhaul to assist with the upgrade of the railway. Ex TGR V9 (TGR / Drewry 1959) is preparing to propel the two ballast hoppers toward Queenstown, after depositing the remaining rake of assorted wagons back in the dead end siding,17 April 2013. Photo: Scott Gould

including co-ordination of infrastructure works and repairs to rolling stock.

Importantly he will also oversee preparations for passenger operations for the summer tourist season, when the railway is expected to be operational again.

West Coast Mayor Darryl Gerrity said the appointment was great for the West Coast, but couldn't understand why it's taking so long for the maintenance work to go to tender.

"The money was granted in February and yet we are still waiting for it to go out to tender," Cr Gerrity said. "I don't understand why it's taking so long."

Mr O'Byrne said in July that the tender process for track repairs is expected to commence in mid-August with tenders for bridge works at the Strahan end of the track to start shortly afterwards. He also said the hunt to find a new operator is also continuing and the government is encouraged by the interest that has been shown.

The Advocate 7/13

OVERSEAS NEWS

UNITED KINGDOM

Work is progressing on the rebuilding progress of ex WW1 Hunslet 1215. The loco was one of five still surviving that worked in Queensland's sugar cane industry after the war.

The War Office Locomotive Trust reports that thanks to a Prism Grant the original cast iron smokebox saddle has been successfully restored by specialists Cast Iron Welding Services and after machining has been reinstated in the chassis. With the completion of machining of the left cylinder (also repaired by CIWS) it is hoped to complete refitting of both cylinders with fitted bolts in the next couple of weeks along with two new frame stretchers. These were found to be necessary after one was found to be missing and the other much modified. A big rivetting session is also planned shortly to reattach a number of brackets, angles and the repaired brake hanger pins. Chairman Ian Hughes said,

"*It`s good that we have now begun the reconstruction phase after all the hard work in stripping the loco to bare essentials. We look forward to seeing her return to steam as soon as practicable and preferably in 2014 with our supporters' financial help.*"

After much internal debate new axle box castings are in production and will be machined as soon as received. Those found on the loco consisted of two cast iron, two fabricated and two one piece gunmetal! Into the autumn the coupled wheel axle sets will be receiving new axles and adjustment to back to back dimensions. Re-wheeling of the chassis will then enable springs and brake assemblies to be fitted along with refurbished motion components. These will also be NDT tested before fitting to ensure integrity when back in service.

Thoughts have turned to the boiler design, since the existing boiler has severe external corrosion in some areas and has the added complication of being of WWII Australian build to a slightly different profile from the original design. The Belpaire type firebox involves more complex bending and flanging, adding to the expense of construction cost as does the narrow firebox bottom. Design work is needed to obtain insurance company approval before final quotations can be obtained from boiler makers and then ordered as soon as possible to have any chance of seeing 1215 steaming for September 2014.

War Office Locomotive Trust 8/13

Hunslet 1215 of 1916 has its smokebox saddle casting refitted after repairs. After serving in WW1, 1215 operated at Queensland's Bingera and Invicta mills before being shipped back to England in 2005 for restoration. Photo: Copyright Mike Lynskey, courtesy of War Office Locomotive Trust

Above: *On its way from Tannalo Loops to Marian Mill, Eimco B-B DH* FARLEIGH *(L254 of 1990) crosses Palm Tree Creek near Pinnacle with 80 loaded 6-tonne bins on 8 August. Photo: Scott Jesser*
Below: *Marian Mill's Eimco B-B DH* BOONGANNA *(L257 of 1990) with a rake of fulls at Tannalo Loops, 28 August 2013. Photo: Scott Jesser*